HB-TP08-C Depth Range: 0.00 - 3.00 m

HB-TP08-C Depth Range: 0.00 - 3.00 m

Jacobs

Client:	Tasmanian Networks		
Project:	Project Marinus - Heybridge SI		
Drawn:	AV	**Checked:**	AC

Title:	HB-TP08-C		
Scale:	NTS	**Drawing Number:**	1/1

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Engineering Log - Excavation

HB-TP09-C

Project: Heybridge Converter Station
Page: 1 of 1
Client:
Location: Heybridge Converter Station Site, Heybridge TAS
Project No: IS360318 -1

Contractor:	Treloar Transport	**Easting:**	413871.2 m	**Elevation:**	9.58 m	**Started:**	31/01/2022
Plant:	Kobelco SK135 13.5t Excavator	**Northing:**	5452741.5 m	**Datum:**	AHD	**Finished:**	31/01/2022
Logged By:	MW **Checked By:** AC	**Grid:**	GDA2020	**Inclination:**	-90°	**Orientation:**	N/A

EXCAVATION INFORMATION | MATERIAL SUBSTANCE

Method	Penetration	Groundwater Levels	Samples & SPT Data	RL (m)	Depth (m)	Graphic Log	Material Description SOIL TYPE: Plasticity or Particle Characteristics, Colour, Secondary and Minor Components	Moisture	Consistency Relative Density	DCP (blows/ 100mm)	Field Test Data & Other Observations
E		Not Observed		9	0.0		FILL: Gravelly SILT: low plasticity, grey brown, fine to coarse grained gravel, fine to medium grained sand	M <Wp			FILL
			B		0.5		Silty Sandy CLAY: medium plasticity, orange brown mottled, fine to medium grained sand; trace fine to medium grained, sub-angular to angular gravel	M <Wp	St		RESIDUAL SOIL 0.50 : PP >600 kPa, k = 0.0588 W/mK, R = 1701.8 Ccm/W, in-situ moisture content = 13.1%
			B		1.0		Sandy GRAVEL: fine to coarse grained, sub-angular to angular, fine to coarse grained sand, low plasticity silt; with sub-angular to angular cobbles, sub-angular to angular boulder up to 300mm	M	D		EXTREMELY WEATHERED MATERIAL 1.00 : PP >600 kPa, k = 0.1214 W/mK, R = 823.723 Ccm/W, in-situ moisture content = 6.7%
				8	1.5		Exploratory hole terminated at 1.40 m Refusal				
				7	2.5						
				6	3.5						

METHOD & SUPPORT	PENETRATION	GROUNDWATER	SAMPLES & FIELD TESTS	MOISTURE	DENSITY (N-value)	CONSISTENCY (SU) {N-value}
N Natural/Existing cutting E Excavator BH Backhoe Bucket B Buldozer R Ripper	No resistance ranging to refusal VE E F H VH	= Water level (static) = Water inflow	D Disturbed Sample B Bulk Sample SPT SPT Sample U Undisturbed Sample E Enviro Sample W Water Sample HP Hand Penetrometer HV Hand Vane Shear (P: Peak Su R: Residual Su)	D = Dry M = Moist W = Wet Wp = Plastic Limit Wl = Liquid Limit	VL Very Loose 0 - 4 L Loose 4 - 10 MD Medium Dense 10 - 30 D Dense 30 - 50 VD Very Dense 50 - 100	VS Very Soft < 12 kPa {0-2} S Soft 12 - 25 {2-4} F Firm 25 - 50 {4-8} St Stiff 50 - 100 {8-15} VSt Very Stiff 100 - 200 {15-30} H Hard > 200 kPa {>30}

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HB-TP09-C Depth Range: 0.00 - 1.40 m

HB-TP09-C Depth Range: 0.00 - 1.40 m

Jacobs

Client:	Tasmanian Networks		
Project:	Project Marinus - Heybridge SI		
Drawn:	MW	**Checked:**	AC

Title:	HB-TP09-C		
Scale:	NTS	**Drawing Number:**	1/1

This figure was created for Jacobs' client. Jacobs accepts no responsibility for any reliance on this information by third parties.

Appendix C. Dynamic Cone Penetrometer Results

DYNAMIC CONE PENETROMETER TEST

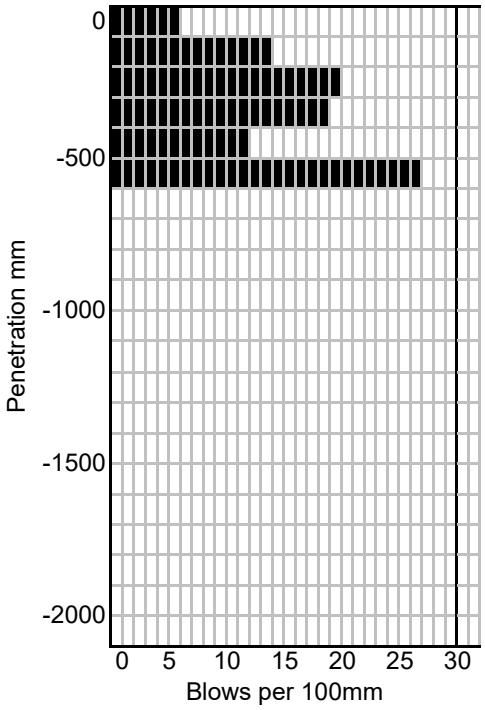
Project:	Heybridge SI	**Date Tested:**	28/01/2022
Project No:	IS360318	**Tested by:**	MW
Site Location:	Heybridge Converter Station		

Test No: 1

Location: HB-TP01-C

R.L.at start of test: 7.29m AHD

Penetration (mm)	No of blows
100	6
200	14
300	20
400	19
500	12
600	27

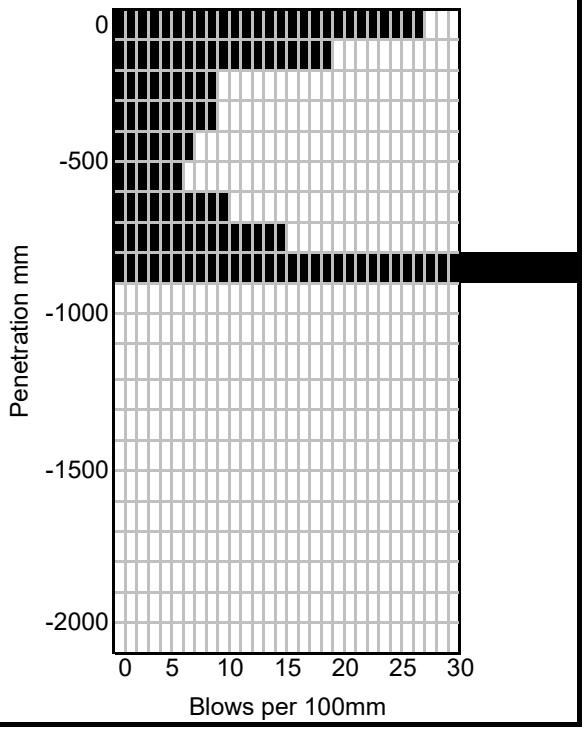


Test No: 2

Location: HB-TP02-C

R.L.at start of test: 6.73m AHD

Penetration (mm)	No of blows
100	27
200	19
300	9
400	9
500	7
600	6
700	10
800	15
900	37



DYNAMIC CONE PENETROMETER TEST

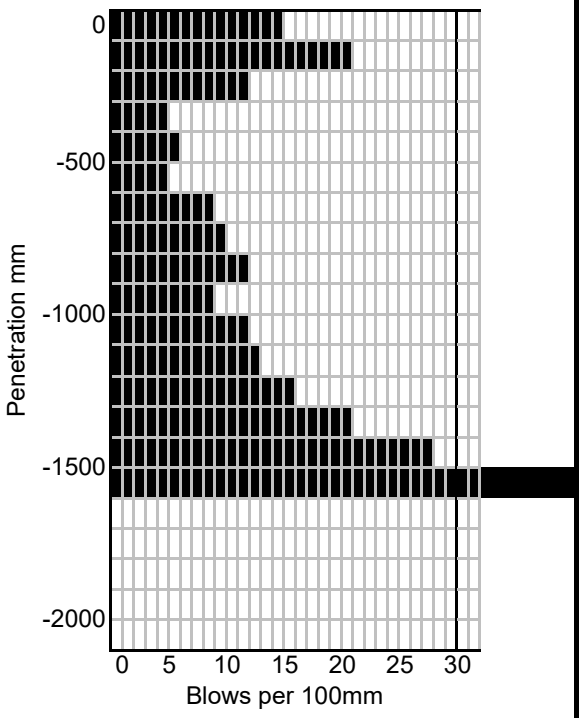
Project:	Heybridge SI	**Date Tested:**	31/02/2022
Project No:	IS360318	**Tested by:**	MW
Site Location:	Heybridge Converter Station		

Test No: 3

Location: HB-TP03-C

R.L.at start of test: 8.04m AHD

Penetration (mm)	No of blows
100	15
200	21
300	12
400	5
500	6
600	5
700	9
800	10
900	12
1000	9
1100	12
1200	13
1300	16
1400	21
1500	28
1600	42

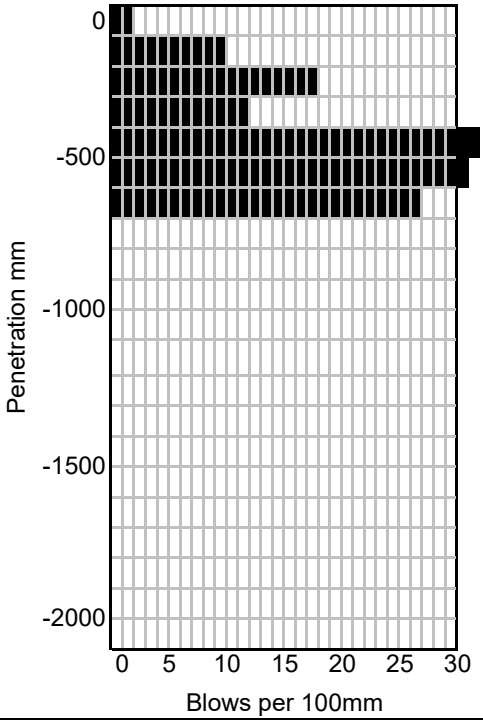


Test No: 4

Location: HB-TP04-C

R.L.at start of test: 10.2m AHD

Penetration (mm)	No of blows
100	2
200	10
300	18
400	12
500	32
600	31
700	27



DYNAMIC CONE PENETROMETER TEST

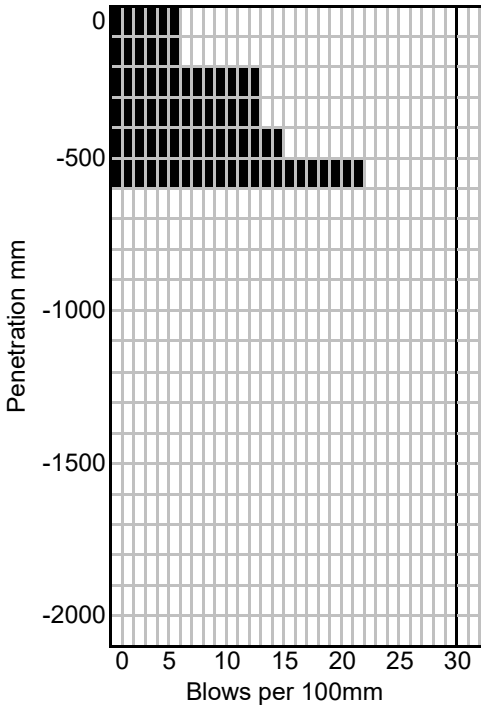
Project:	Heybridge SI	**Date Tested:**	28/01/2022
Project No:	IS360318	**Tested by:**	MW
Site Location:	Heybridge Converter Station		

Test No: 5

Location: HB-TP05-C

R.L.at start of test: 8.2m AHD

Penetration (mm)	No of blows
100	6
200	6
300	13
400	13
500	15
600	22

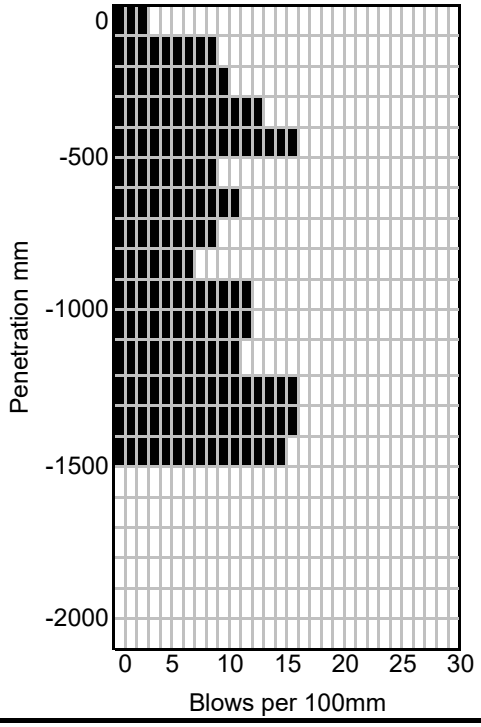


Test No: 6

Location: HB-TP06-C

R.L.at start of test: 11.14m AHD

Penetration (mm)	No of blows
100	3
200	9
300	10
400	13
500	16
600	9
700	11
800	9
900	7
1000	12
1100	12
1200	11
1300	16
1400	16
1500	15



DYNAMIC CONE PENETROMETER TEST

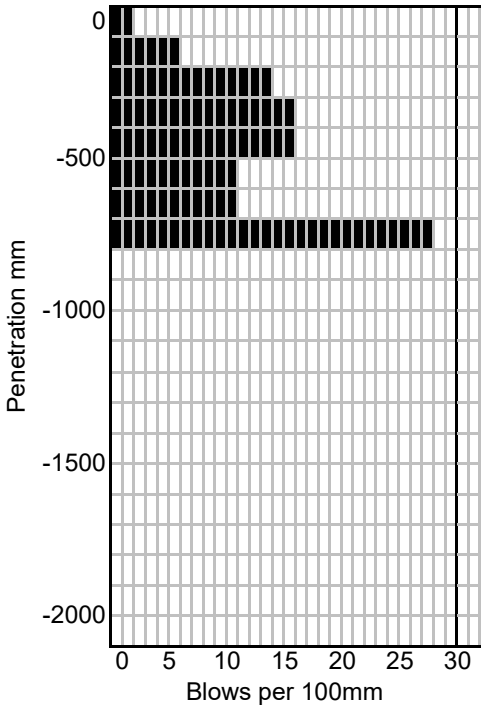
Project:	Heybridge SI	**Date Tested:**	28/01/2022
Project No:	IS360318	**Tested by:**	MW
Site Location:	Heybridge Converter Station		

Test No: 7

Location: HB-TP07-C

R.L.at start of test: 13.59m AHD

Penetration (mm)	No of blows
100	2
200	6
300	14
400	16
500	16
600	11
700	11
800	28

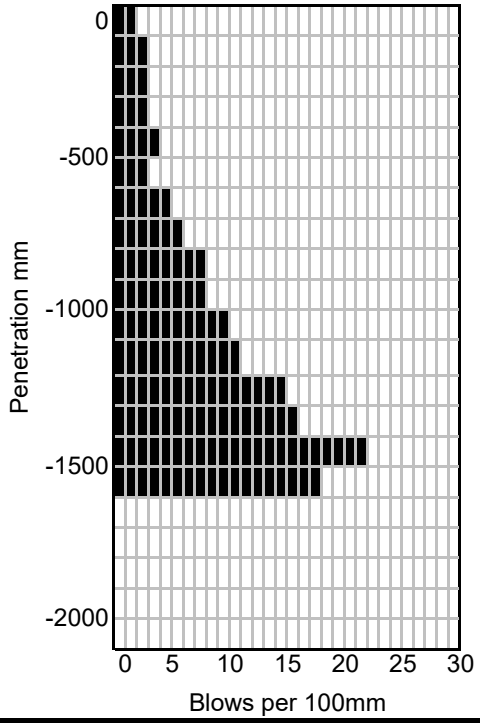


Test No: 8

Location: HB-TP08-C

R.L.at start of test: 7.75m AHD

Penetration (mm)	No of blows
100	2
200	3
300	3
400	3
500	4
600	3
700	5
800	6
900	8
1000	8
1100	10
1200	11
1300	15
1400	16
1500	22
1600	18



DYNAMIC CONE PENETROMETER TEST

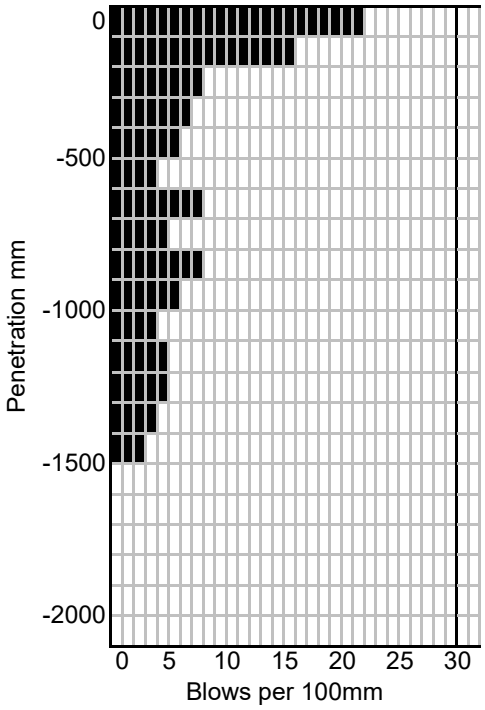
Project:	Heybridge SI	**Date Tested:**	31/01/2022
Project No:	IS360318	**Tested by:**	MW
Site Location:	Heybridge Converter Station		

Test No: 9

Location: HB-TP09-C

R.L.at start of test: 9.58m AHD

Penetration (mm)	No of blows
100	22
200	16
300	8
400	7
500	6
600	4
700	8
800	5
900	8
1000	6
1100	4
1200	5
1300	5
1400	4
1500	3



Appendix D. Groundwater Monitoring Well Installation Logs

Piezometer Installation Details

HB-BH01-C

Project: Project Marinus - Heybridge SI **Page:** 1 of 1

Client: Tasmanian Networks **Location:** Heybridge Converter Station Site, Heybridge TAS **Project No:** IS360318

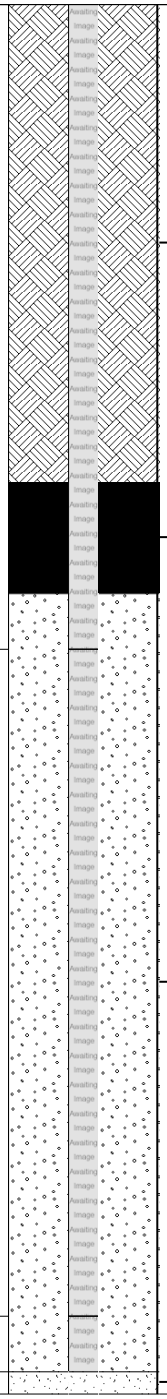
Contractor:	Tasmanian Drilling	**Easting:**	413994.6 m	**Elevation:**	6.21 m	**Started:**	04/02/2022
Plant:	Hanjin D&B 8-D	**Northing:**	5452650.7 m	**Datum:**		**Finished:**	07/02/2022
Logged By:	MW **Checked By:**	**Grid:**	GDA2020	**Inclination:**	-90°	**Orientation:**	

DRILLING | MATERIAL SUBSTANCE | INSTALLATION DETAILS

Method	Groundwater Levels	RL (m)	Depth (m)	Graphic Log	Description of Strata ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, major defect type)
HA		6	0.0		FILL: Silty GRAVEL: fine to coarse grained, black, low plasticity; with fine to coarse sand
			0.5		FILL: SILT: low plasticity, black; with fine to medium grained sand, trace fine grained gravel
			1.0		FILL: Sandy GRAVEL: fine to medium grained, sub-angular to sub-rounded, orange brown; with red and grey mottling, fine to coarse grained sand, low plasticity silt
		5			Sandy SILT: low plasticity, orange brown, fine to medium grained sand
			1.5		*1.60m: colour becoming pale grey with minor white mottling*
			2.0		Sandy GRAVEL: fine to medium grained, sub-angular to angular, pale grey with minor yellow mottling, fine to coarse grained sand; with low plasticity clay; trace silt
		4			
			2.5		Gravelly SILT: low plasticity, pale grey; with minor yellow mottling, fine to medium grained, sub-angular to angular gravel
HQ3			3.0		QUARTZWACKE: fine grained, pale grey with very minor yellow and red staining; thinly to medium bedded; high strength
		3	3.5		
			4.0		
		2	4.5		
			5.0		
		1	5.5		
			6.0		
		0	6.5		*6.20m: increased yellow staining*
			7.0		*6.60m: colour becoming pale grey with minor yellow and red brown staining*
		-1	7.5		*7.10m: colour becoming red brown pale grey with minor yellow staining*
			8.0		
		-2	8.5		
			9.0		*8.75m: colour becoming yellow brown pale grey*
		-3	9.5		CORELOSS
			10.0		QUARTZWACKE: fine grained, red brown-pale grey with yellow staining; thinly to medium bedded; medium strength *9.40m: colour becoming red brown-pale grey with yellow staining* *9.70m: increased red brown staining*
		-4	10.5		CORELOSS
			11.0		QUARTZWACKE: fine grained, pale grey with yellow and orange brown staining; very thinly to thinly bedded; medium to high strength; slightly weathered *10.70m: colour becoming pale grey with yellow and orange brown staining*
		-5	11.5		
			12.0		
		-6	12.5		Exploratory hole terminated at 12.50 m Target depth

ID : PLAIN

Tip Depth & Tip RL : 12.50 m -6.29 m



DRILLING METHOD

AS Auger
AD/V Auger V-bit
AD/T Auger TC bit
WB Washbore
RR Rock Roller
SNC Sonic Drilling
AH Air Hammer
NMLC NMLC Coring
NQ NQ Coring
HQ HQ Coring
PQ PQ Coring

GROUNDWATER SYMBOLS

Water level (static) Water level (during drilling)

This log was created for Jacobs' client. Jacobs accepts no responsibility for any reliance on this information by third parties.

Piezometer Installation Details

HB-BH02-C

Project: Project Marinus - Heybridge SI **Page:** 1 of 1

Client: Tasmanian Networks **Location:** Heybridge Converter Station Site, Heybridge TAS **Project No:** IS360318

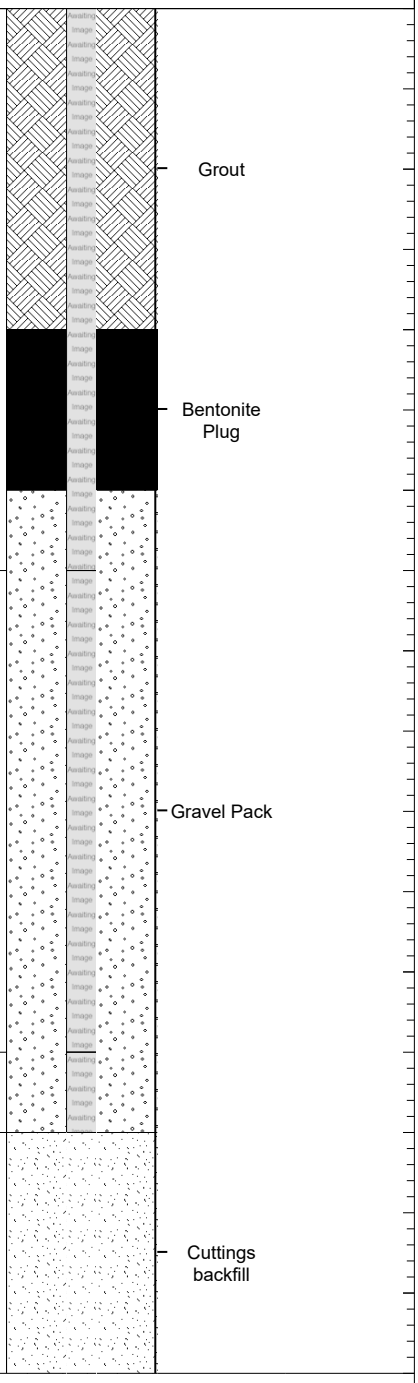
Contractor:	Tasmanian Drilling	**Easting:**	414106.5 m	**Elevation:**	6.59 m	**Started:**	04/02/2022
Plant:	Hanjin D&B 8-D	**Northing:**	5452568.2 m	**Datum:**		**Finished:**	04/02/2022
Logged By:	MW **Checked By:**	**Grid:**	GDA2020	**Inclination:**	-90°	**Orientation:**	

Method	Groundwater Levels	RL (m)	Depth (m)	Graphic Log	Description of Strata ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, major defect type)
HA			0.0		FILL: Silty GRAVEL: fine to coarse grained, angular to sub-angular, pale brown grey, low plasticity silt; with fine to medium grained sand
			0.5		CONCRETE
		6	1.0		
			1.5		
HA		5	2.0		Silty CLAY: low plasticity, yellow brown-pale grey; with fine to medium grained, sub-rounded to sub-angular gravel, with fine to medium grained sand
			2.5		Silty Sandy GRAVEL: fine to medium grained, subangular to angular, yellow brown, fine to coarse grained sand, low plasticit silt
		4	3.0		
			3.5		QUARTZWACKE: fine grained, red brown with yellow/orange staining; medium bedded; high strength; moderately weathered
		3	4.0		*1.60m: colour becoming pale grey with minor white mottling*
			4.5		*4.14m: colour becoming yellow brown* *4.20m: colour becoming pale grey-red with yellow staining*
		2	5.0		*4.60m: colour becoming dark grey*
			5.5		*5.00m: colour becoming dark grey*
HQ3		1	6.0		*5.22m: colour becoming pale grey-red with yellow staining*
			6.5		*5.80m: colour becoming dark grey with minor yellow and orange strands*
		0	7.0		*6.70m: yellow staining* *6.80m: red and yellow staining*
			7.5		*7.30m: colour becoming red brown with yellow staining*
		-1	8.0		*7.66m: quartz/calcite seam ~10mm*
			8.5		Exploratory hole terminated at 8.50 m Target depth
		-2			

INSTALLATION DETAILS

ID : SLOTTED

Tip Depth & Tip RL : 8.50 m -1.91 m



DRILLING METHOD

AS Auger
AD/V Auger V-bit
AD/T Auger TC bit
WB Washbore
RR Rock Roller
SNC Sonic Drilling
AH Air Hammer
NMLC NMLC Coring
NQ NQ Coring
HQ HQ Coring
PQ PQ Coring

GROUNDWATER SYMBOLS

Water level (static)
Water level (during drilling)

This log was created for Jacobs' client. Jacobs accepts no responsibility for any reliance on this information by third parties.

Piezometer Installation Details

HB-BH03-C

Project: Project Marinus - Heybridge SI **Page:** 1 of 1

Client: Tasmanian Networks **Location:** Heybridge Converter Station Site, Heybridge TAS **Project No:** IS360318

Contractor:	Tasmanian Drilling	**Easting:**	414223.2 m	**Elevation:**	8.68 m	**Started:**	03/02/2022
Plant:	Hanjin D&B 8-D	**Northing:**	5452487.4 m	**Datum:**		**Finished:**	03/02/2022
Logged By:	MW **Checked By:**	**Grid:**	GDA2020	**Inclination:**	-90°	**Orientation:**	

DRILLING				MATERIAL SUBSTANCE		INSTALLATION DETAILS
Method	Groundwater Levels	RL (m)	Depth (m)	Graphic Log	Description of Strata ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, major defect type)	ID : SLOTTED Tip Depth & Tip RL : 9.90 m -1.22 m
HQ3		8	0.5		CORELOSS	
			1.0		QUARTZWACKE: fine grained, grey-yellow brown; medium strength; medium bedding; low to moderately weathered; high strength	
			1.5		*1.10m: colour becoming yellow brown-grey*	
		7	2.0		Extremely Weathered QUARTZWACKE: Recovered as Silty GRAVEL: fine to coarse grained, angular to sub-angular, mottled grey-yellow brown, low plasticity silt; with fine to coarse grained sand	
			2.5		QUARTZWACKE: fine grained, yellow brown-grey with yellow/orange staining; medium bedding; moderately weathered; medium to high strength	
		6	3.0		*2.00m: colour becoming pale grey with minor yellow staining*	Grout
			3.5		CORELOSS	
		5	4.0		Extremely Weathered QUARTZWACKE: Recovered as GRAVEL: fine to coarse grained, angular to sub-angular, yellow brown	
			4.5		CORELOSS	
		4	5.0		Silty GRAVEL: fine to coarse grained, sub-angular to sub-rounded, yellow brown grey, low plasticity silt	
			5.5		QUARTZWACKE: fine grained, pale grey with orange staining; medium bedding; moderately weathered; high to very strength	
		3	6.0			Bentonite Plug
			6.5		*6.48m: colour changing to dark grey with minor yellow staining, laminated*	6.50 m
		2	7.0		*7.20m: colour changing to pale grey with minor yellow/orange staining*	
			7.5		*7.60m: increased yellow staining*	
		1	8.0		*8.00m: colour becoming yellow-pale grey*	Gravel Pack
			8.5		*8.60m: red staining*	
		0	9.0			
			9.5			9.50 m
		-1			*9.57m: colour changed to pale grey with minor yellow staining*	
					Exploratory hole terminated at 9.90 m Target depth	9.90 m

DRILLING METHOD

AS Auger
AD/V Auger V-bit
AD/T Auger TC bit
WB Washbore
RR Rock Roller
SNC Sonic Drilling
AH Air Hammer
NMLC NMLC Coring
NQ NQ Coring
HQ HQ Coring
PQ PQ Coring

GROUNDWATER SYMBOLS

Water level (static)
Water level (during drilling)

This log was created for Jacobs' client. Jacobs accepts no responsibility for any reliance on this information by third parties.

Piezometer Installation Details

HB-BH06-C

Project: Project Marinus - Heybridge SI **Page:** 1 of 1

Client: Tasmanian Networks **Location:** Heybridge Converter Station Site, Heybridge TAS **Project No:** IS360318

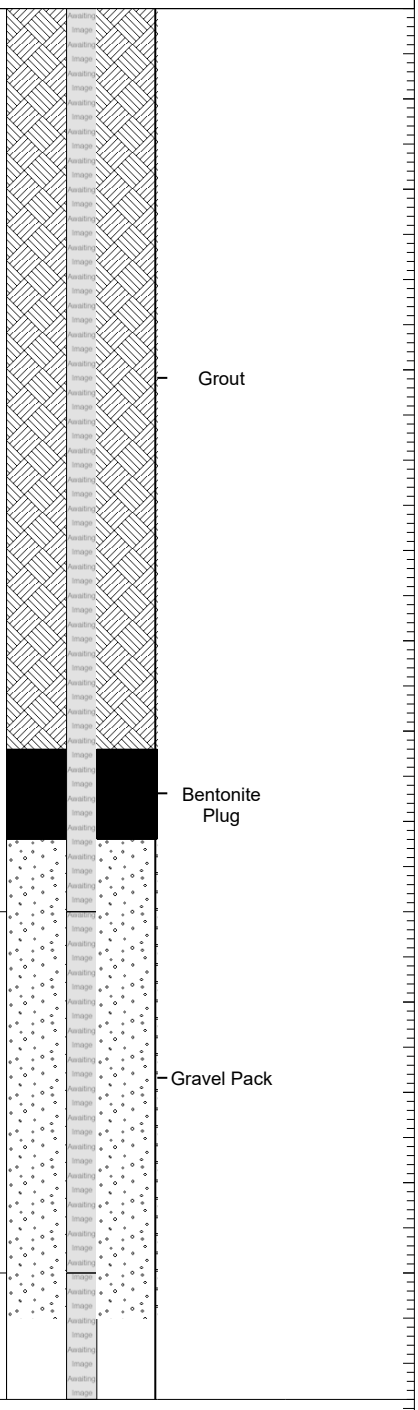
Contractor:	Tasmanian Drilling	**Easting:**	414058.7 m	**Elevation:**	9.42 m	**Started:**	31/01/2022
Plant:	Hanjin D&B 8-D	**Northing:**	5452425.9 m	**Datum:**		**Finished:**	01/02/2022
Logged By:	MW **Checked By:**	**Grid:**	GDA2020	**Inclination:**	-90°	**Orientation:**	

Method	Groundwater Levels	RL (m)	Depth (m)	Graphic Log	Description of Strata ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, major defect type)
HA		9	0.5		FILL: Clayey GRAVEL: fine to medium grained, angular to sub-angular, grey brown, low plasticity clay; with fine to coarse grained sand
					0.15m: colour changing to yellow brown, gravels becoming fine to coarse grained, sub-angular to angular
			1.0		FILL: Silty GRAVEL: fine to medium grained, sub-angular to angular, black, low plasticity silt; with fine to coarse grained sand
		8	1.5		Silty SAND: fine to medium grained, brown, low plasticity silt; with fine grained, sub-angular to angular gravel
			2.0		Silty GRAVEL: fine to medium grained, sub-angular to angular, brown grey, low plasticity silt; with fine to coarse grained sand
		7	2.5		QUARTZWACKE: fine grained, dark grey with minor yellow staining; medium bedded; moderately weathered; very high strength
					2.75m: colour becoming pale grey with minor yellow staining
			3.0		CORELOSS
		6	3.5		QUARTZWACKE: fine grained, pale grey with very minor yellow staining and white streaking; thinly to medium bedded; slightly weathered; high to very high strength
			4.0		*3.30m: colour becoming pale grey with very minor yellow staining, minor white streaking*
		5	4.5		*3.62m: quartz seam*
					3.99m: quartz seam
			5.0		
		4	5.5		
			6.0		*6.00m: very minor yellow staining*
		3	6.5		
			7.0		
		2	7.5		
			8.0		*8.00m: minor orange staining*
		1	8.5		
HQ3			9.0		*8.70m: increased orange staining*
		0	9.5		
			10.0		CORELOSS
		-1	10.5		QUARTZWACKE: fine grained, pale grey with minor yellow staining, thinly to medium bedded; slightly weathered; high to very high strength
			11.0		
		-2	11.5		
			12.0		*12.10m: colour becoming grey with orange staining*
		-3	12.5		*12.40m: colour becoming pale grey with minor yellow staining*
			13.0		
		-4	13.5		
			14.0		*13.70m: minor orange staining*
		-5	14.5		*14.50m: very minor yellow staining*
			15.0		
		-6	15.5		Exploratory hole terminated at 15.40 m Target depth

INSTALLATION DETAILS

ID : SLOTTED

Tip Depth & Tip RL : 15.40 m -5.98 m



DRILLING METHOD

AS Auger
AD/V Auger V-bit
AD/T Auger TC bit
WB Washbore
RR Rock Roller
SNC Sonic Drilling
AH Air Hammer
NMLC NMLC Coring
NQ NQ Coring
HQ HQ Coring
PQ PQ Coring

GROUNDWATER SYMBOLS

Water level (static)
Water level (during drilling)

This log was created for Jacobs' client. Jacobs accepts no responsibility for any reliance on this information by third parties.

Piezometer Installation Details

HB-BH06-C(S)

Project: Project Marinus - Heybridge SI **Page:** 1 of 1

Client: Tasmanian Networks **Location:** Heybridge Converter Station Site, Heybridge TAS **Project No:** IS360318

Contractor:	Tasmanian Drilling	**Easting:**	414060.9 m	**Elevation:**	9.46 m	**Started:**	01/02/2022
Plant:	Hanjin D&B 8-D	**Northing:**	5452423.6 m	**Datum:**		**Finished:**	01/02/2022
Logged By:	MW **Checked By:**	**Grid:**	GDA2020	**Inclination:**	-90°	**Orientation:**	

DRILLING				MATERIAL SUBSTANCE		INSTALLATION DETAILS	
Method	Groundwater Levels	RL (m)	Depth (m)	Graphic Log	Description of Strata ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, major defect type)	ID : SLOTTED	Tip Depth & Tip RL : 2.50 m 6.96 m
HA		9	0.5		FILL: Clayey GRAVEL: fine to medium grained, angular to sub-angular, grey brown, low plasticity clay; with fine to coarse grained sand		Grout
			1.0		Silty GRAVEL: fine to medium grained, sub-angular to angular, black, low plasticity silt; with fine to coarse grained sand		Bentonite Plug
		8	1.5		Silty SAND: fine to medium grained, brown, low plasticity silt; with fine grained, sub-angular to angular gravel	1.50 m	Gravel Pack
			2.0		Silty GRAVEL: fine to medium grained, sub-angular to angular, brown grey, low plasticity silt; with fine to coarse grained sand		
		7	2.5		Exploratory hole terminated at 2.50 m Target depth	2.50 m	

DRILLING METHOD

AS Auger
AD/V Auger V-bit
AD/T Auger TC bit
WB Washbore
RR Rock Roller
SNC Sonic Drilling
AH Air Hammer
NMLC NMLC Coring
NQ NQ Coring
HQ HQ Coring
PQ PQ Coring

GROUNDWATER SYMBOLS

Water level (static)
Water level (during drilling)

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Appendix E. Geotechnical Laboratory Testing Certificates

Appendix D1. Soil Laboratory Test Results

Material Test Report

Ground Science Pty Ltd
Ground Science Laboratory
13 Brock Street Thomastown Victoria 3074
Phone: (03) 9464 4617
Email: tim@groundscience.com.au

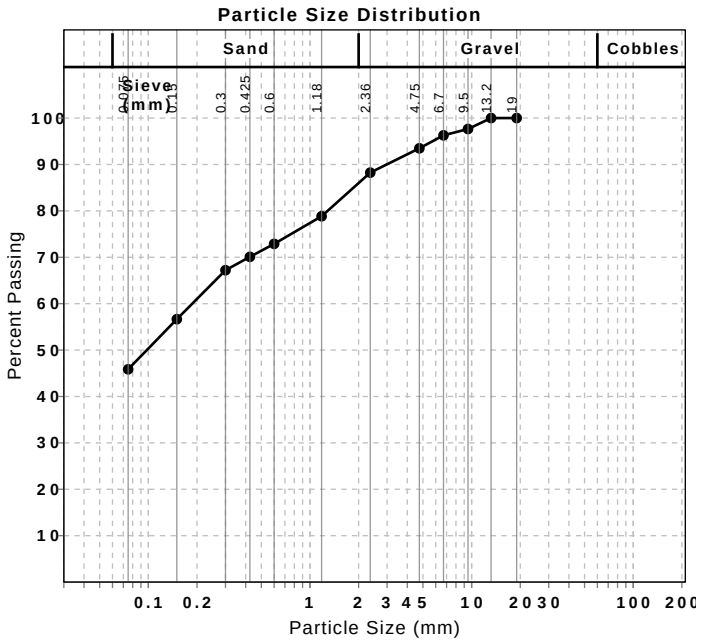
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Tim Senserrick
Laboratory Manager
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S1
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 01/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH01-C , Depth: 1.0 - 1.45m**
Material: sandy CLAY/SILT, medium to high plasticity, grey, sand fine to coarse grained, trace gravel

Particle Size Distribution (AS1289 3.6.1)						
Sieve	Passed %	Passing Limits		Retained %	Retained Limits	
19 mm	**100**			0		
13.2 mm	**100**			0		
9.5 mm	**98**			2		
6.7 mm	**96**			1		
4.75 mm	**93**			3		
2.36 mm	**88**			5		
1.18 mm	**79**			9		
0.6 mm	**73**			6		
0.425 mm	**70**			3		
0.3 mm	**67**			3		
0.15 mm	**57**			11		
0.075 mm	**46**			11		

Moisture Content (AS1289.2.1.1)	
Moisture Content (%)	16.3



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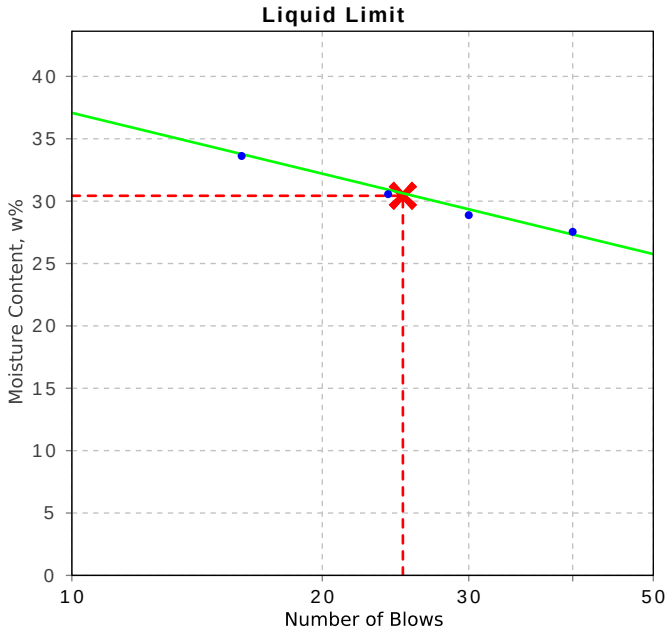
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S2
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 16/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH01-C , Depth: 1.5 - 1.8m**
Material: CLAY, low plasticity, grey

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	30		
Plastic Limit (%)	18		
Plasticity Index (%)	**12**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	3.0		
Cracking Crumbling Curling	Cracking		



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Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S3
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH01-C , Depth: 2.0 - 2.2m**
Material: sandy GRAVEL, fine to medium grained, grey, sand fine to coarse grained, with clay, with silt

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.72
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	

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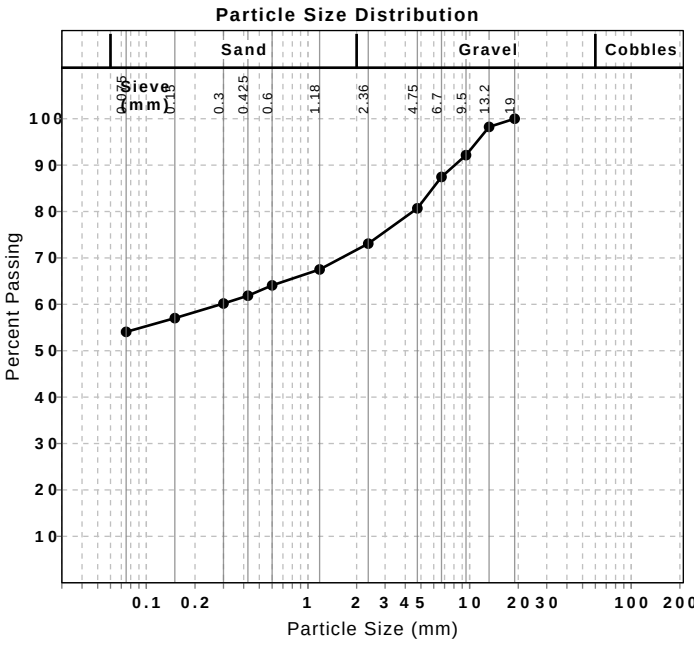
Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S4
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 10/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH02-C , Depth: 1.5 - 2.0m**
Material: CLAY, medium to high plasticity, grey, with gravel, with sand

Particle Size Distribution (AS1289 3.6.1)						
Sieve	Passed %	Passing Limits		Retained %	Retained Limits	
19 mm	**100**			0		
13.2 mm	**98**			2		
9.5 mm	**92**			6		
6.7 mm	**87**			5		
4.75 mm	**81**			7		
2.36 mm	**73**			8		
1.18 mm	**68**			6		
0.6 mm	**64**			3		
0.425 mm	**62**			2		
0.3 mm	**60**			2		
0.15 mm	**57**			3		
0.075 mm	**54**			3		

Moisture Content (AS1289.2.1.1)	
Moisture Content (%)	14.9



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Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S5
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH04-C , Depth: 2.5 - 2.88m**
Material: clayey gravelly SAND, fine to coarse grained, grey, fines of low plasticity, gravel fine to intermediate grained, with silt

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.71
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	

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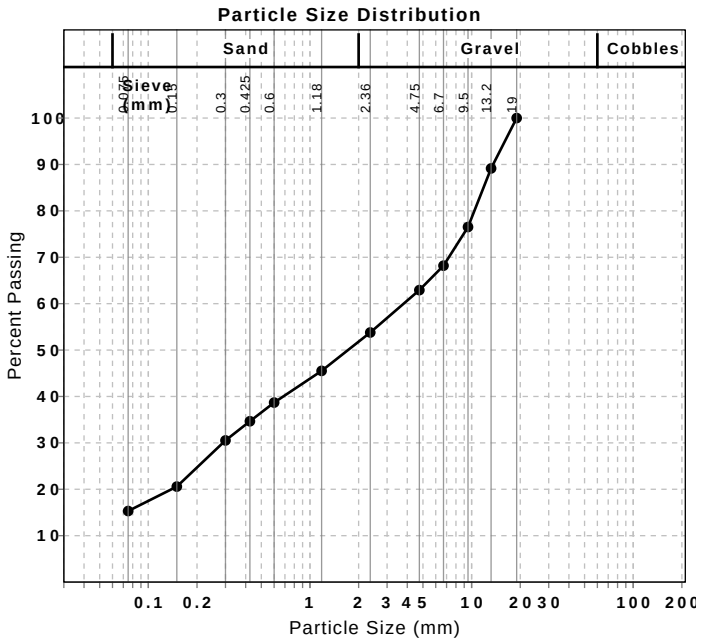
Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S6
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 01/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH05-C , Depth: 1.0 - 1.45m**
Material: clayey/silty sandy GRAVEL, fine to medium grained, brown, sand fine to coarse grained, fines of low to medium plasticity

Particle Size Distribution (AS1289 3.6.1)						
Sieve	Passed %	Passing Limits		Retained %	Retained Limits	
19 mm	**100**			0		
13.2 mm	**89**			11		
9.5 mm	**77**			13		
6.7 mm	**68**			8		
4.75 mm	**63**			5		
2.36 mm	**54**			9		
1.18 mm	**46**			8		
0.6 mm	**39**			7		
0.425 mm	**35**			4		
0.3 mm	**31**			4		
0.15 mm	**21**			10		
0.075 mm	**15**			5		

Moisture Content (AS1289.2.1.1)	
Moisture Content (%)	7.2



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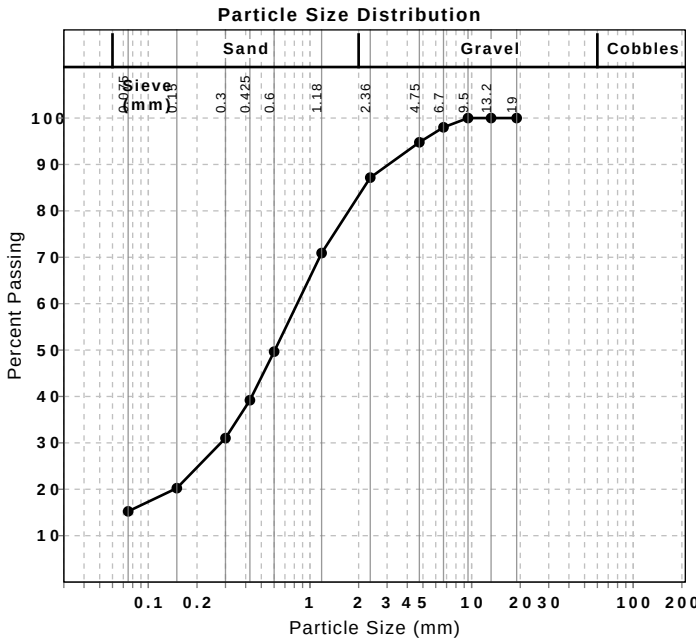
Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S9
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 01/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-BH06-C , Depth: 1.5 - 1.95m**
Material: clayey/silty SAND, fine to coarse grained, brown, fines of low to medium plasticity, trace gravel

Particle Size Distribution (AS1289 3.6.1)						
Sieve	Passed %	Passing Limits		Retained %	Retained Limits	
19 mm	**100**			0		
13.2 mm	**100**			0		
9.5 mm	**100**			0		
6.7 mm	**98**			2		
4.75 mm	**95**			3		
2.36 mm	**87**			8		
1.18 mm	**71**			16		
0.6 mm	**50**			21		
0.425 mm	**39**			10		
0.3 mm	**31**			8		
0.15 mm	**20**			11		
0.075 mm	**15**			5		

Moisture Content (AS1289.2.1.1)	
Moisture Content (%)	6.3



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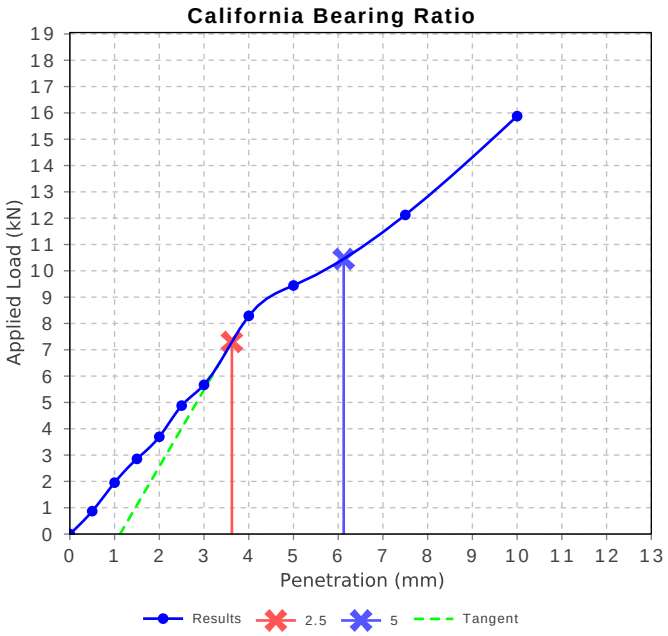
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S10
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 07/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP01-C , Depth: 0.9 - 1.1m**
Material: silty GRAVEL, fine to coarse, brown, fines of low to medium plasticity

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	2.5 mm		
CBR %	**60**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	2.02		
Optimum Moisture Content (%)	10.5		
Laboratory Density Ratio (%)	98.5		
Laboratory Moisture Ratio (%)	95.5		
Dry Density after Soaking (t/m^3)	2.00		
Field Moisture Content (%)	9.1		
Moisture Content at Placement (%)	10.2		
Moisture Content Top 30mm (%)	11.0		
Moisture Content Rest of Sample (%)	10.4		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	168.0		
Swell (%)	0.0		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	1.4		



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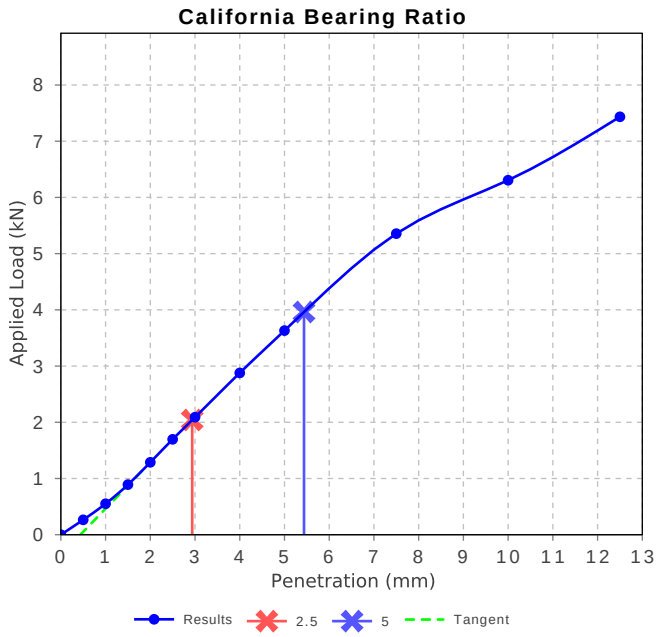
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S11
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP02-C , Depth: 0.8 - 1.0m**
Material: silty CLAY, low to medium plasticity, brown

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	5 mm		
CBR %	**20**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.79		
Optimum Moisture Content (%)	15.0		
Laboratory Density Ratio (%)	98.0		
Laboratory Moisture Ratio (%)	99.5		
Dry Density after Soaking (t/m^3)	1.75		
Field Moisture Content (%)	12.3		
Moisture Content at Placement (%)	14.9		
Moisture Content Top 30mm (%)	16.0		
Moisture Content Rest of Sample (%)	15.9		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	170.0		
Swell (%)	0.0		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	1.0		



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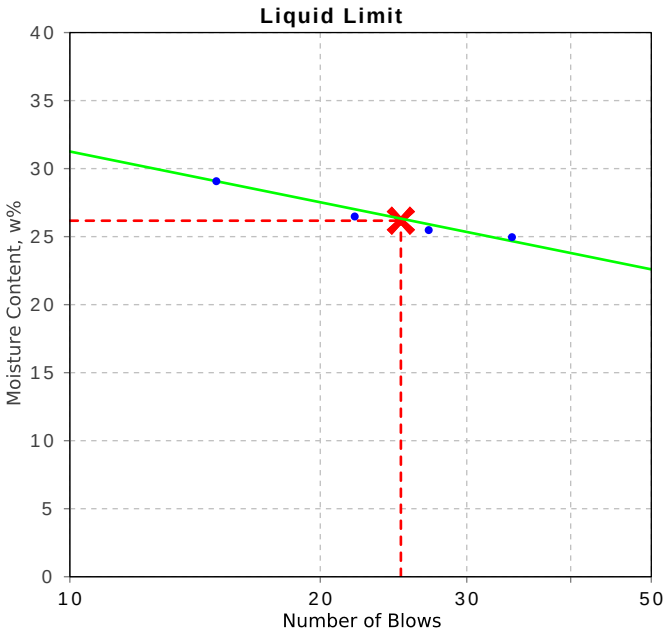
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S12
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP02-C , Depth: 2.4 - 2.5m**
Material: sandy GRAVEL, fine to intermediate grained, grey, fines of Low Plasticity, trace clay, trace silt

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	26		
Plastic Limit (%)	20		
Plasticity Index (%)	**6**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	1.5		
Cracking Crumbling Curling	Cracking		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.71
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	



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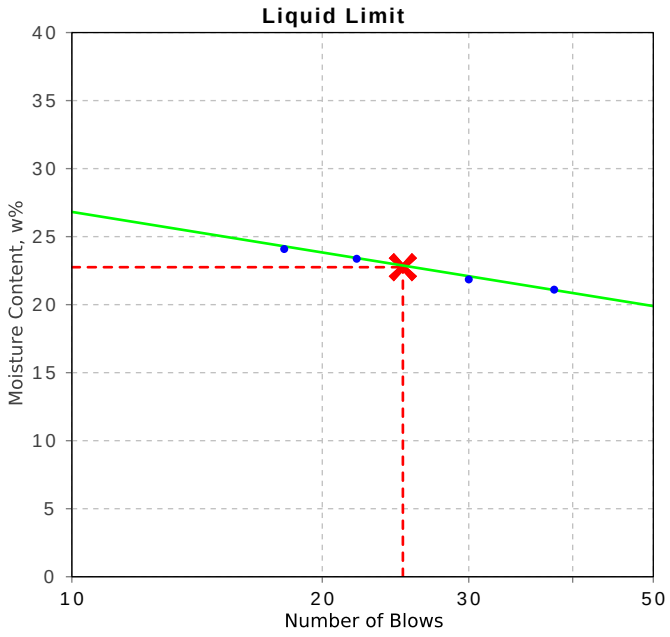
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S13
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP03-C , Depth: 2.0 - 2.5m**
Material: clayey sandy SILT, Low Plasticity, brown, sand fine to coarse grained, trace gravel

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	23		
Plastic Limit (%)	17		
Plasticity Index (%)	**6**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	2.0		
Cracking Crumbling Curling	Cracking		

Emerson Class Number of a Soil (AS 1289 3.8.1)		Min	Max
Emerson Class	**1**		
Soil Description			
Nature of Water	distilled		
Temperature of Water (^{o}C)	20		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.71
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	



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Material Test Report

Ground Science Pty Ltd
Ground Science Laboratory
13 Brock Street Thomastown Victoria 3074
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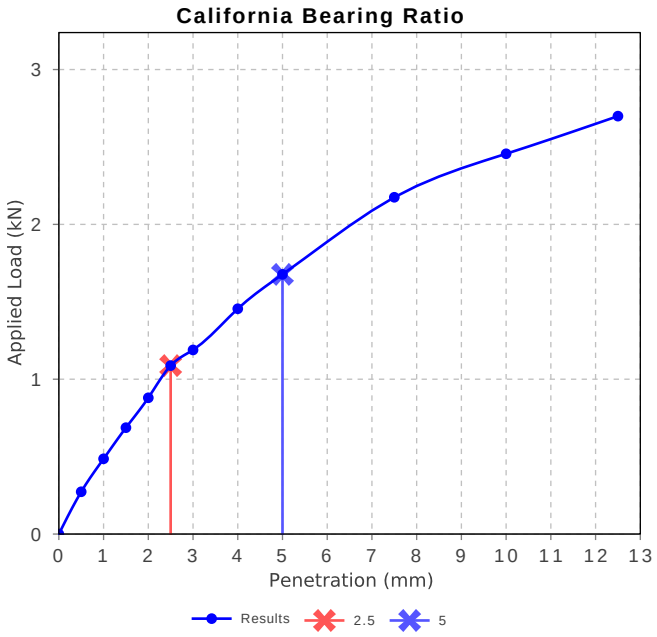
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Tim Senserrick
Laboratory Manager
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S13
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 07/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP03-C , Depth: 2.0 - 2.5m**
Material: clayey sandy SILT, Low Plasticity, brown, sand fine to coarse grained, trace gravel

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	5 mm		
CBR %	**8**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.88		
Optimum Moisture Content (%)	12.5		
Laboratory Density Ratio (%)	98.5		
Laboratory Moisture Ratio (%)	96.5		
Dry Density after Soaking (t/m^3)	1.85		
Field Moisture Content (%)	13.0		
Moisture Content at Placement (%)	12.2		
Moisture Content Top 30mm (%)	15.0		
Moisture Content Rest of Sample (%)	15.7		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	168.1		
Swell (%)	0.5		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	0.0		



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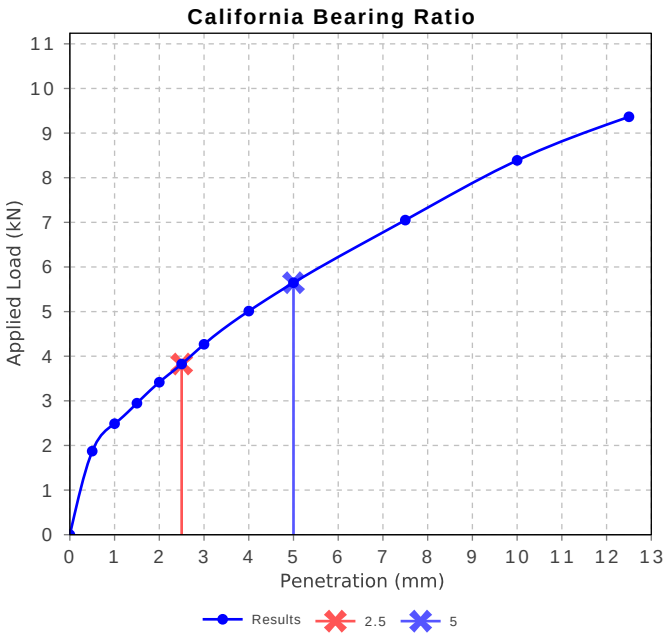
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S14
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP04-C , Depth: 1.5 - 1.9m**
Material: gravelly SAND, fine to coarse, brown

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	2.5 mm		
CBR %	**30**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.92		
Optimum Moisture Content (%)	7.0		
Laboratory Density Ratio (%)	98.0		
Laboratory Moisture Ratio (%)	97.5		
Dry Density after Soaking (t/m^3)	1.88		
Field Moisture Content (%)	7.0		
Moisture Content at Placement (%)	7.0		
Moisture Content Top 30mm (%)	12.2		
Moisture Content Rest of Sample (%)	12.6		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	168.0		
Swell (%)	0.0		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	4.1		



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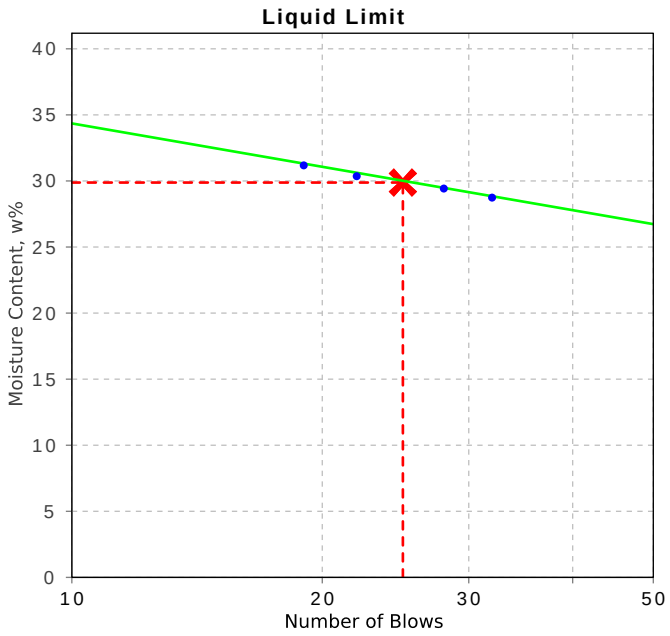
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S15
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 01/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP04-C , Depth: 2.8 - 3.0m**
Material: CLAY/SILT, low plasticity, brown

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	30		
Plastic Limit (%)	23		
Plasticity Index (%)	**7**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	2.0		
Cracking Crumbling Curling	Cracking		



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Client: Jacobs (Melbourne)
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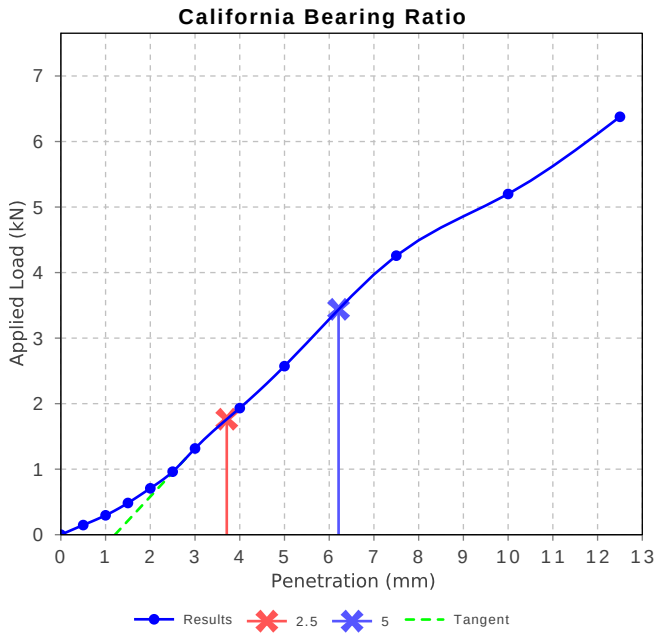
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S16
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP05-C , Depth: 0.5 - 0.7m**
Material: gravelly CLAY/SILT, low to medium plasticity, brown

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	5 mm		
CBR %	**17**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.77		
Optimum Moisture Content (%)	16.5		
Laboratory Density Ratio (%)	97.5		
Laboratory Moisture Ratio (%)	101.5		
Dry Density after Soaking (t/m^3)	1.72		
Field Moisture Content (%)	17.4		
Moisture Content at Placement (%)	16.6		
Moisture Content Top 30mm (%)	17.8		
Moisture Content Rest of Sample (%)	16.7		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	168.0		
Swell (%)	0.5		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	12.6		



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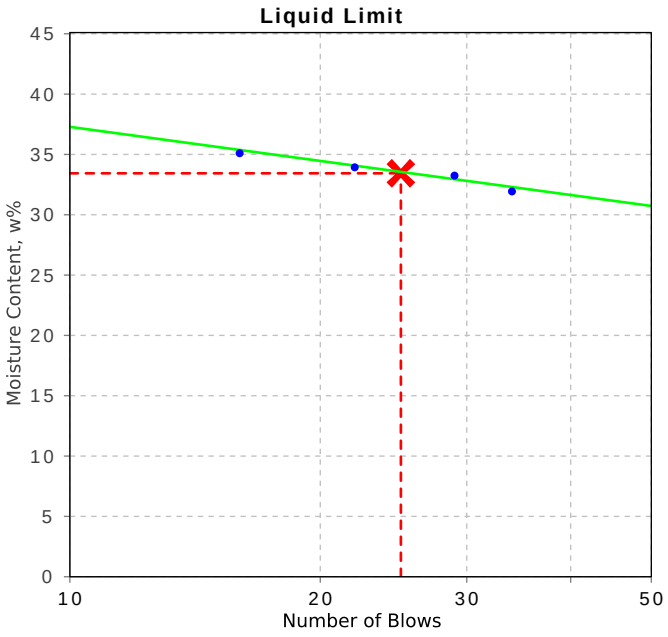
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S17
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP06-C , Depth: 1.8 - 1.9m**
Material: sandy SILT, Low Plasticity, brown, sand fine to coarse grained, with clay, trace gravel

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	33		
Plastic Limit (%)	24		
Plasticity Index (%)	**9**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	2.0		
Cracking Crumbling Curling	Cracking		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.68
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	

Emerson Class Number of a Soil (AS 1289 3.8.1)		Min	Max
Emerson Class	**1**		
Soil Description			
Nature of Water	distilled		
Temperature of Water (^{o}C)	20		



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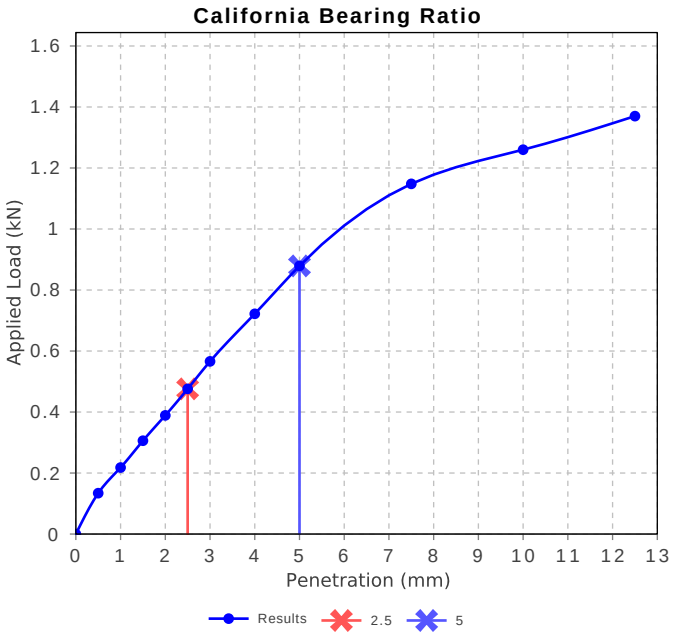
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S17
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 07/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP06-C , Depth: 1.8 - 1.9m**
Material: sandy SILT, Low Plasticity, brown, sand fine to coarse grained, with clay, trace gravel

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	5 mm		
CBR %	**4.5**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.88		
Optimum Moisture Content (%)	13.5		
Laboratory Density Ratio (%)	98.5		
Laboratory Moisture Ratio (%)	96.5		
Dry Density after Soaking (t/m^3)	1.81		
Field Moisture Content (%)	16.4		
Moisture Content at Placement (%)	13.2		
Moisture Content Top 30mm (%)	19.1		
Moisture Content Rest of Sample (%)	13.3		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	170.0		
Swell (%)	2.5		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	0.0		



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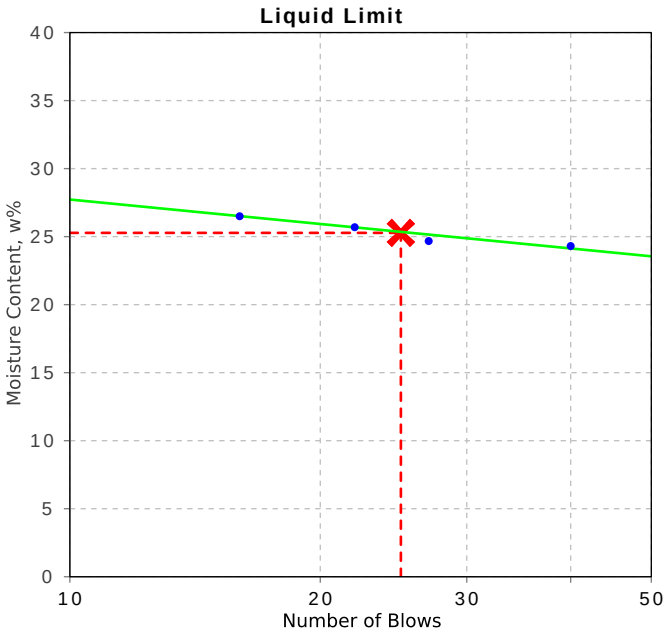
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S19
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP07-C , Depth: 0.35 - 0.5m**
Material: clayey GRAVEL, fine to coarse grained, brown, fines of Low Plasticity, with sand, with silt

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	25		
Plastic Limit (%)	17		
Plasticity Index (%)	**8**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	2.5		
Cracking Crumbling Curling	Cracking		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.77
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	



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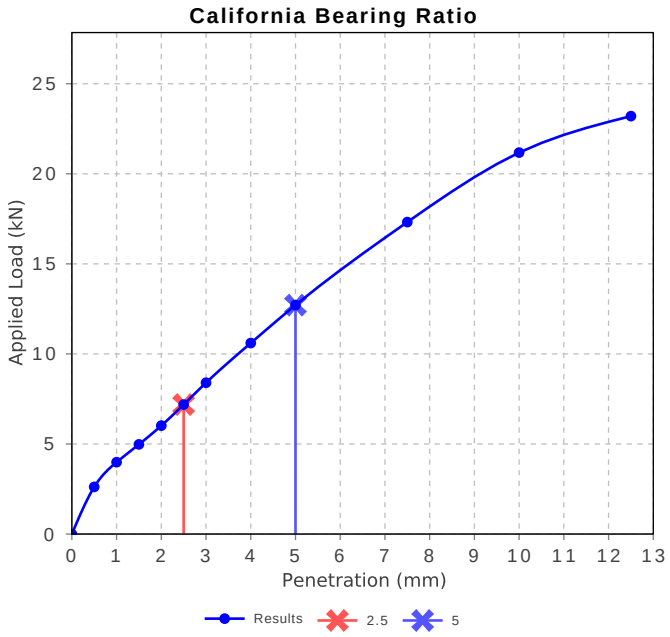
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S20
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP07-C , Depth: 1.8 - 2.0m**
Material: gravelly SAND, fine to coarse grained, brown, with clay, trace silt

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	5 mm		
CBR %	**60**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.64		
Optimum Moisture Content (%)	23.0		
Laboratory Density Ratio (%)	98.0		
Laboratory Moisture Ratio (%)	101.0		
Dry Density after Soaking (t/m^3)	1.60		
Field Moisture Content (%)	19.7		
Moisture Content at Placement (%)	23.4		
Moisture Content Top 30mm (%)	25.5		
Moisture Content Rest of Sample (%)	23.5		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	170.0		
Swell (%)	0.0		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	7		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.60
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	



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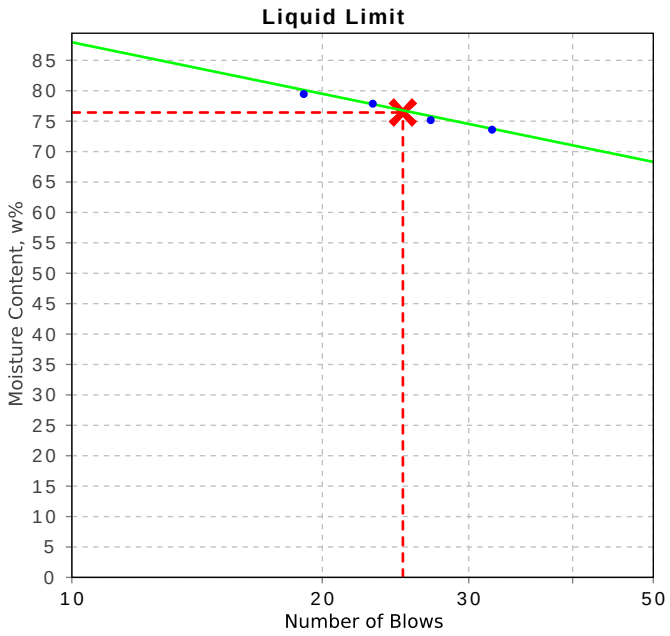
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S21
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 08/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP08-C , Depth: 1.0m**
Material: silty CLAY, High Plasticity, brown, with sand

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	76		
Plastic Limit (%)	38		
Plasticity Index (%)	**38**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	11.0		
Cracking Crumbling Curling	Cracking		

Emerson Class Number of a Soil (AS 1289 3.8.1)		Min	Max
Emerson Class	**5**		
Soil Description			
Nature of Water	distilled		
Temperature of Water (^{o}C)	20		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.79
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	



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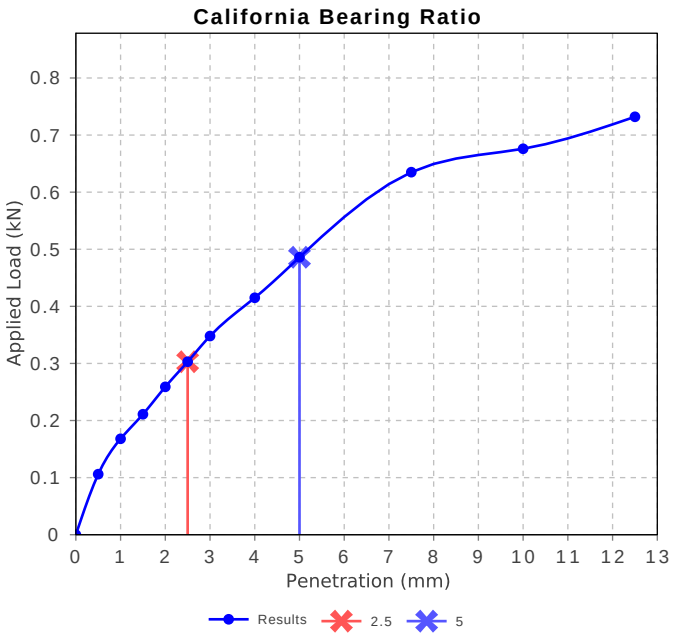
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S21
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 07/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP08-C , Depth: 1.0m**
Material: silty CLAY, High Plasticity, brown, with sand

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	5 mm		
CBR %	**2.5**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.14		
Optimum Moisture Content (%)	52.0		
Laboratory Density Ratio (%)	98.5		
Laboratory Moisture Ratio (%)	99.5		
Dry Density after Soaking (t/m^3)	1.12		
Field Moisture Content (%)	57.3		
Moisture Content at Placement (%)	51.8		
Moisture Content Top 30mm (%)	54.7		
Moisture Content Rest of Sample (%)	51.9		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	168.2		
Swell (%)	0.5		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	0.0		



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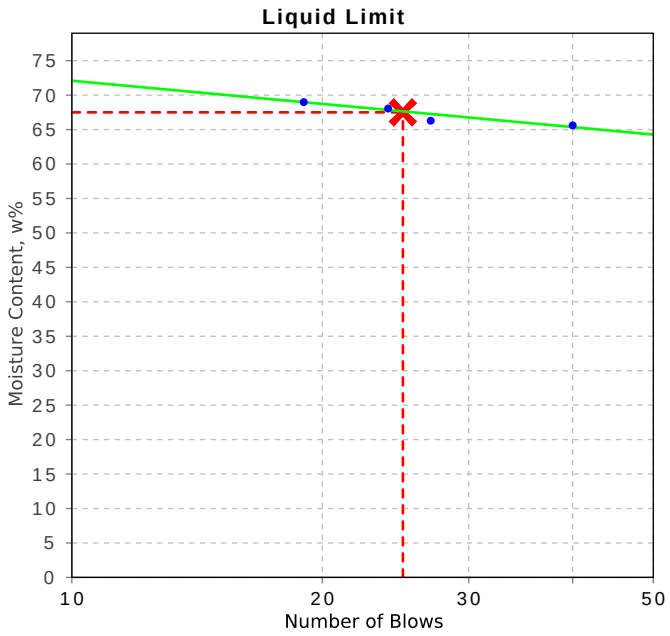
Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S22
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 01/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP08-C , Depth: 2.0m**
Material: CLAY, high plasticity, brown

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	68		
Plastic Limit (%)	36		
Plasticity Index (%)	**32**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	10.0		
Cracking Crumbling Curling	Cracking		



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Material Test Report

Ground Science Pty Ltd
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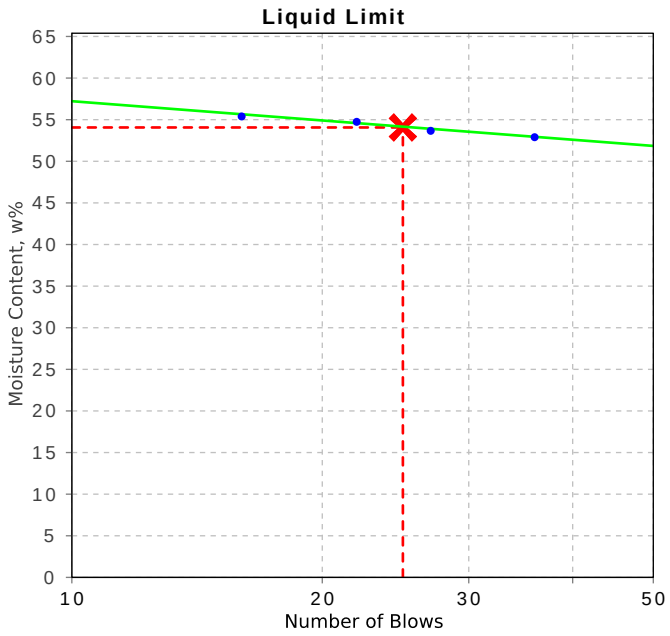
Approved Signatory: Tim Senserrick
Laboratory Manager
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S23
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 02/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP08-C , Depth: 3.0m**
Material: SILT, high plasticity, brown

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	54		
Plastic Limit (%)	31		
Plasticity Index (%)	**23**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	6.0		
Cracking Crumbling Curling	Cracking		



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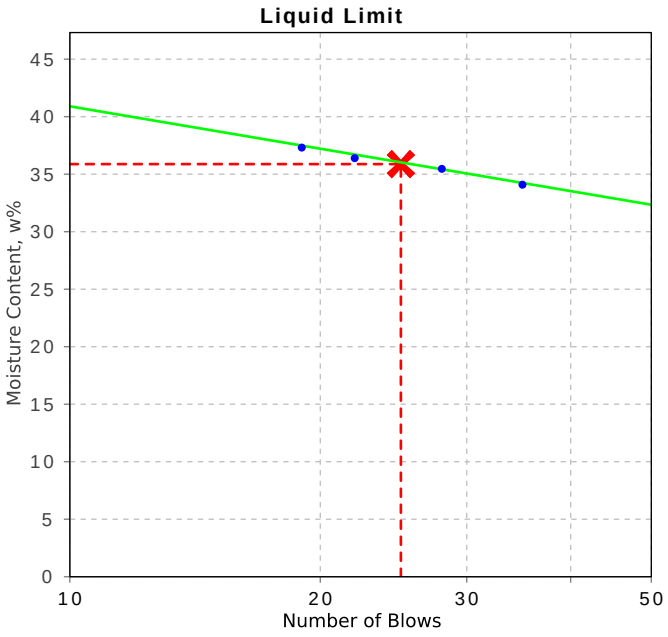
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S24
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 09/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP09-C , Depth: 0.4 - 0.6m**
Material: silty sandy CLAY, Medium Plasticity, brown, sand fine to coarse grained, trace gravel

Atterberg Limit (AS1289 3.1.1 & 3.2.1 & 3.3.1)		Min	Max
Sample History	Oven Dried		
Preparation Method	Dry Sieve		
Liquid Limit (%)	36		
Plastic Limit (%)	17		
Plasticity Index (%)	**19**		

Linear Shrinkage (AS1289 3.4.1)		Min	Max
Moisture Condition Determined By	AS 1289.3.1.1		
Linear Shrinkage (%)	4.5		
Cracking Crumbling Curling	Cracking		

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.62
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	



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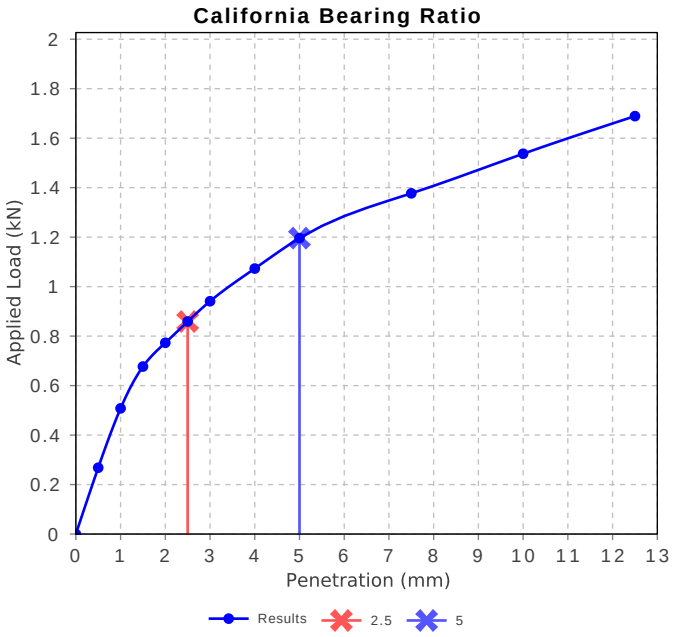
Approved Signatory: Tim Senserrick
Laboratory Manager
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S24
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 07/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HB-TP09-C , Depth: 0.4 - 0.6m**
Material: silty sandy CLAY, Medium Plasticity, brown, sand fine to coarse grained, trace gravel

California Bearing Ratio (AS 1289 6.1.1 & 2.1.1)		Min	Max
CBR taken at	2.5 mm		
CBR %	**7**		
Method of Compactive Effort	Standard		
Method used to Determine MDD	AS 1289 5.1.1 & 2.1.1		
Method used to Determine Plasticity	Visual Assessment		
Maximum Dry Density (t/m^3)	1.75		
Optimum Moisture Content (%)	16.0		
Laboratory Density Ratio (%)	98.0		
Laboratory Moisture Ratio (%)	99.5		
Dry Density after Soaking (t/m^3)	1.70		
Field Moisture Content (%)	14.0		
Moisture Content at Placement (%)	16.0		
Moisture Content Top 30mm (%)	18.6		
Moisture Content Rest of Sample (%)	18.0		
Mass Surcharge (kg)	4.5		
Soaking Period (days)	4		
Curing Hours	168.0		
Swell (%)	1.0		
Oversize Material (mm)	19		
Oversize Material Included	Excluded		
Oversize Material (%)	3		



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NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S25
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 09/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HBLF-BH01-C , Depth: 0.5 - 0.75m**
Material: SAND, fine to coarse grained, brown, trace silt

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.65
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	

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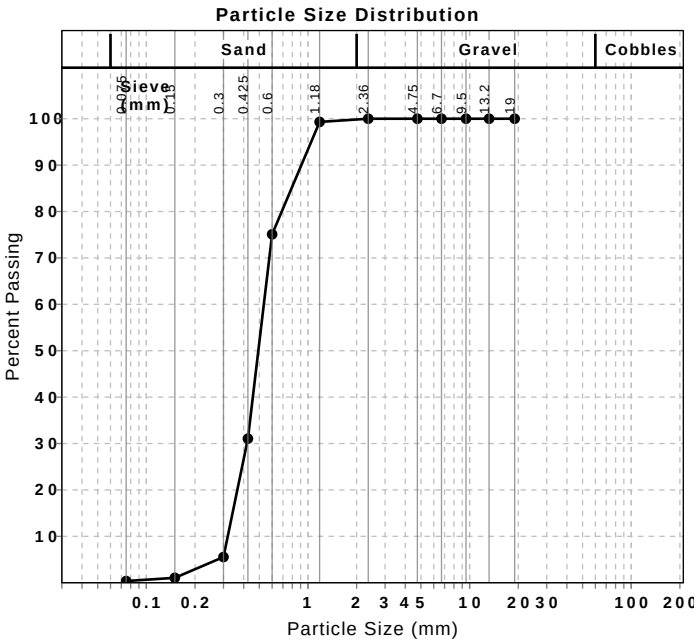
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S26
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 28/02/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HBLF-BH01-C , Depth: 1.0 - 1.45m**
Material: SAND, fine to coarse, brown

Particle Size Distribution (AS1289 3.6.1)						
Sieve	Passed %	Passing Limits		Retained %	Retained Limits	
19 mm	**100**			0		
13.2 mm	**100**			0		
9.5 mm	**100**			0		
6.7 mm	**100**			0		
4.75 mm	**100**			0		
2.36 mm	**100**			0		
1.18 mm	**99**			1		
0.6 mm	**75**			24		
0.425 mm	**31**			44		
0.3 mm	**6**			26		
0.15 mm	**1**			4		
0.075 mm	**0**			1		

Moisture Content (AS1289.2.1.1)	
Moisture Content (%)	2.6



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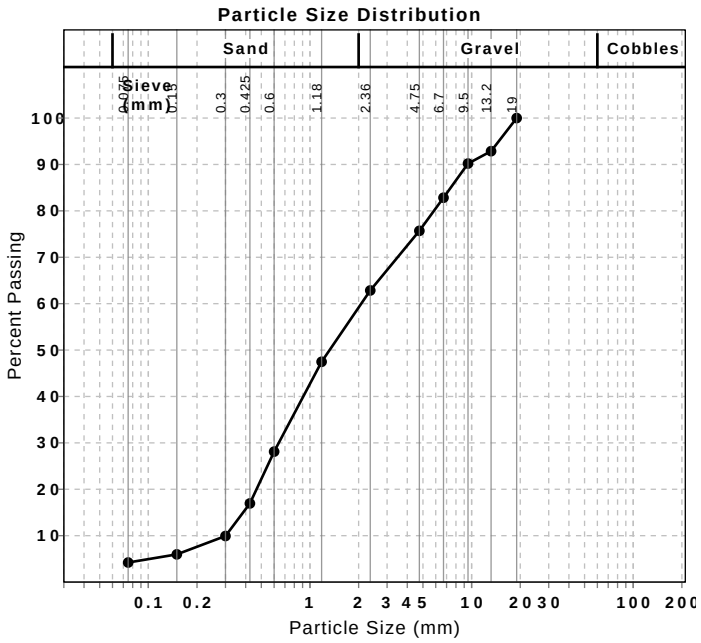
Laboratory Manager
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S28
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 01/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HBLF-BH01-C , Depth: 2.5 - 2.95m**
Material: gravelly SAND, fine to coarse brown, gravel fine to coarse grained, trace clay/silt

Particle Size Distribution (AS1289 3.6.1)						
Sieve	Passed %	Passing Limits		Retained %	Retained Limits	
19 mm	**100**			0		
13.2 mm	**93**			7		
9.5 mm	**90**			3		
6.7 mm	**83**			7		
4.75 mm	**76**			7		
2.36 mm	**63**			13		
1.18 mm	**47**			15		
0.6 mm	**28**			19		
0.425 mm	**17**			11		
0.3 mm	**10**			7		
0.15 mm	**6**			4		
0.075 mm	**4**			2		

Moisture Content (AS1289.2.1.1)	
Moisture Content (%)	10.9



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Laboratory Manager
NATA Accredited Laboratory Number: 15055

Report Number: **GS6209/1-1**
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Sample Number: 62091-S30
Date Sampled: 22/02/2022
Dates Tested: 22/02/2022 - 09/03/2022
Sampling Method: Sampled by Client - Tested as Received
The results apply to the sample as received
Site Selection: Selected by Client
Sample Location: **HBLF-BH02-C , Depth: 0.5 - 0.75m**
Material: SAND, fine to coarse grained, brown, trace silt

Apparent Particle Density of Soil (AS 1289.3.5.1)	
Mean Soil Particle Density Fine (g/cm^3)	2.65
Mean Soil Particle Density Coarse (g/cm^3)	
Soil Particle Density of Total Soil Sample (g/cm^3)	

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Material Test Report

Report Number: GS6209/1-1
Issue Number: 1
Date Issued: 17/03/2022
Client: Jacobs (Melbourne)
452 Flinders St, Melbourne Victoria 3000
Contact: [redacted]
Project Number: GS6209/1
Project Name: Project Marinus - Heybridge Site Investigation (Heybridge)
Project Location: IS360318
Work Request: 7136
Dates Tested: 22/02/2022 - 23/02/2022

Ground Science Pty Ltd
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Approved Signatory: Tim Senserrick
Laboratory Manager
NATA Accredited Laboratory Number: 15055

Moisture Content AS 1289 2.1.1

Sample Number	Sample Location	Moisture Content (%)	Material
62091-S1	HB-BH01-C , Depth: 1.0 - 1.45m	16.3 %	sandy CLAY/SILT, medium to high plasticity, grey, sand fine to coarse grained, trace gravel
62091-S2	HB-BH01-C , Depth: 1.5 - 1.8m	11.1 %	CLAY, low plasticity, grey
62091-S3	HB-BH01-C , Depth: 2.0 - 2.2m	9.4 %	sandy GRAVEL, fine to medium grained, grey, sand fine to coarse grained, with clay, with silt
62091-S4	HB-BH02-C , Depth: 1.5 - 2.0m	14.9 %	CLAY, medium to high plasticity, grey, with gravel, with sand
62091-S5	HB-BH04-C , Depth: 2.5 - 2.88m	11.9 %	clayey gravelly SAND, fine to coarse grained, grey, fines of low plasticity, gravel fine to intermediate grained, with silt
62091-S6	HB-BH05-C , Depth: 1.0 - 1.45m	7.2 %	clayey/silty sandy GRAVEL, fine to medium grained, brown, sand fine to coarse grained, fines of low to medium plasticity
62091-S7	HB-BH05-C , Depth: 2.5 - 2.95m	**	**
62091-S8	HB-BH06-C , Depth: 0.5 - 0.65m	15.3 %	**
62091-S9	HB-BH06-C , Depth: 1.5 - 1.95m	6.3 %	clayey/silty SAND, fine to coarse grained, brown, fines of low to medium plasticity, trace gravel
62091-S10	HB-TP01-C , Depth: 0.9 - 1.1m	9.1 %	silty GRAVEL, fine to coarse, brown, fines of low to medium plasticity
62091-S11	HB-TP02-C , Depth: 0.8 - 1.0m	12.3 %	silty CLAY, low to medium plasticity, brown
62091-S12	HB-TP02-C , Depth: 2.4 - 2.5m	9.7 %	sandy GRAVEL, fine to intermediate grained, grey, fines of Low Plasticity, trace clay, trace silt
62091-S13	HB-TP03-C , Depth: 2.0 - 2.5m	13.0 %	clayey sandy SILT, Low Plasticity, brown, sand fine to coarse grained, trace gravel
62091-S14	HB-TP04-C , Depth: 1.5 - 1.9m	7.0 %	gravelly SAND, fine to coarse, brown
62091-S15	HB-TP04-C , Depth: 2.8 - 3.0m	11.1 %	CLAY/SILT, low plasticity, brown
62091-S16	HB-TP05-C , Depth: 0.5 - 0.7m	17.4 %	gravelly CLAY/SILT, low to medium plasticity, brown
62091-S17	HB-TP06-C , Depth: 1.8 - 1.9m	16.4 %	sandy SILT, Low Plasticity, brown, sand fine to coarse grained, with clay, trace gravel
62091-S18	HB-TP06-C , Depth: 2.7 - 2.8m	10.0 %	**
62091-S19	HB-TP07-C , Depth: 0.35 - 0.5m	7.0 %	clayey GRAVEL, fine to coarse grained, brown, fines of Low Plasticity, with sand, with silt
62091-S20	HB-TP07-C , Depth: 1.8 - 2.0m	19.7 %	gravelly SAND, fine to coarse grained, brown, with clay, trace silt
62091-S21	HB-TP08-C , Depth: 1.0m	57.5 %	silty CLAY, High Plasticity, brown, with sand
62091-S22	HB-TP08-C , Depth: 2.0m	45.2 %	CLAY, high plasticity, brown
62091-S23	HB-TP08-C , Depth: 3.0m	38.2 %	SILT, high plasticity, brown
62091-S24	HB-TP09-C , Depth: 0.4 - 0.6m	14.0 %	silty sandy CLAY, Medium Plasticity, brown, sand fine to coarse grained, trace gravel
62091-S25	HBLF-BH01-C , Depth: 0.5 - 0.75m	4.3 %	SAND, fine to coarse grained, brown, trace silt
62091-S26	HBLF-BH01-C , Depth: 1.0 - 1.45m	4.1 %	SAND, fine to coarse, brown
62091-S28	HBLF-BH01-C , Depth: 2.5 - 2.95m	10.9 %	gravelly SAND, fine to coarse brown, gravel fine to coarse grained, trace clay/silt
62091-S30	HBLF-BH02-C , Depth: 0.5 - 0.75m	4.6 %	SAND, fine to coarse grained, brown, trace silt
62091-S31	HBLF-BH01-C , Depth: 1.0 - 1.28m	3.8 %	**

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Sample Number	Sample Location	Moisture Content (%)	Material
62091-S31	HBLF-BH01-C , Depth: 1.0 - 1.28m	3.8 %	**

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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AA**

Lab Reference No.	**#S3**	Sample Identification:	**HB-BH01-C @ 2.0-2.2m**

Laboratory Specimen Classification: **sandy GRAVEL, fine to intermediate grained, grey, sand fine to coarse grained, with clay, with silt**

Particle Size Distribution AS1289 3.6.3

Sieve Size	% Passing	Specification
63 mm	**100**	
53 mm	**100**	
37.5 mm	**100**	
26.5 mm	**100**	
19.0 mm	**100**	
13.2 mm	**98**	
9.5 mm	**92**	
6.7 mm	**85**	
4.75 mm	**74**	
2.36 mm	**59**	
1.18 mm	**46**	
600 um	**37**	
425 um	**34**	
300 um	**31**	
150 um	**25**	
75 um	**20**	
hydrometer values		
45 um	**19**	
23 um	**17**	
16 um	**17**	
12 um	**16**	
8 um	**16**	
1 um	**11**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**ND**	
Plastic Limit	%	AS1289 3.2.1	**ND**	
Plasticity Index	%	AS1289 3.3.1	**ND**	
Linear Shrinkage	%	AS1289 3.4.1	**ND**	
Moisture Content	%	AS1289 2.1.1	**11.2**	

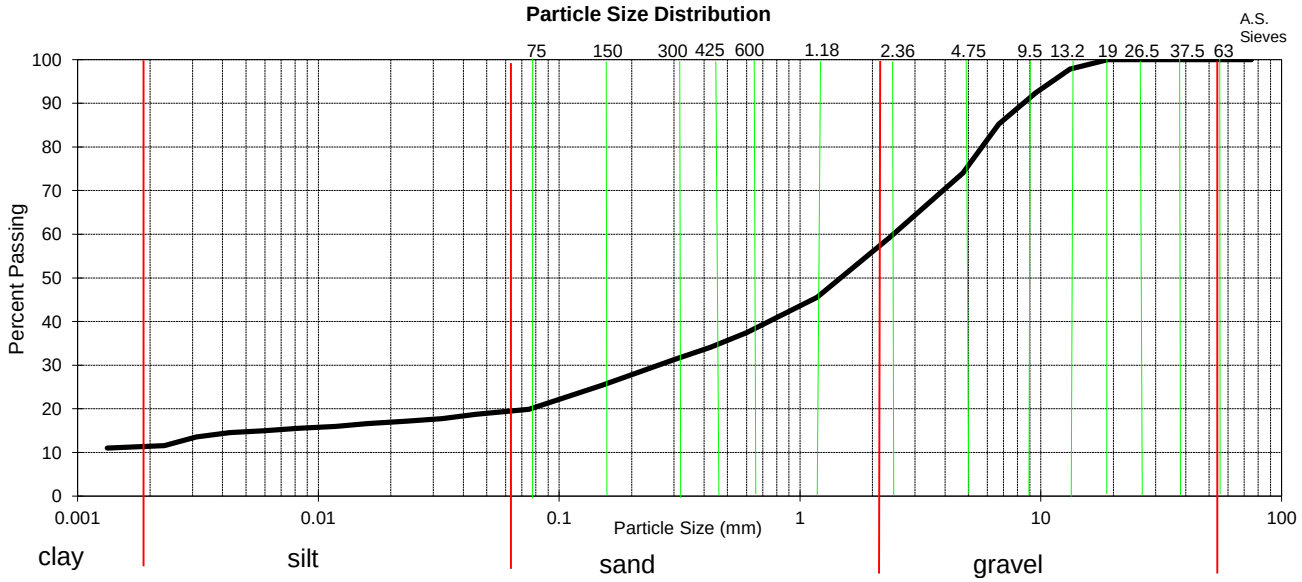
Sample History:	Oven Dried
Preparation Method:	Dry sieved
Cracking / Curling of linear shrinkage:	-
Linear shrinkage mould length:	0

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydrometer: g/l
sampled by client, tested as received.

Material properties

GRAVEL CONTENT =	**41**	%
SAND CONTENT =	**39**	%
SILT CONTENT =	**8**	%
CLAY CONTENT =	**12**	%



Date: 8/03/2022

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Pelin Atas Erden
Approved Signatory

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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AB**
Lab Reference No.	**#S5**	Sample Identification:	**HB-BH04-C @ 2.5 - 2.88m**
Laboratory Specimen Classification:	**clayey, gravelly SAND, fine to coarse grained, grey, fines of low plasticity, gravel fine to intermediate grained, with silt**		

Particle Size Distribution AS1289 3.6.3

Sieve Size	% Passing	Specification
63 mm	**100**	
53 mm	**100**	
37.5 mm	**100**	
26.5 mm	**100**	
19.0 mm	**100**	
13.2 mm	**100**	
9.5 mm	**94**	
6.7 mm	**86**	
4.75 mm	**77**	
2.36 mm	**64**	
1.18 mm	**50**	
600 um	**42**	
425 um	**37**	
300 um	**33**	
150 um	**27**	
75 um	**21**	
hydrometer values		
47 um	**21**	
24 um	**20**	
16 um	**20**	
12 um	**20**	
8 um	**19**	
1 um	**14**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**ND**	
Plastic Limit	%	AS1289 3.2.1	**ND**	
Plasticity Index	%	AS1289 3.3.1	**ND**	
Linear Shrinkage	%	AS1289 3.4.1	**ND**	
Moisture Content	%	AS1289 2.1.1	**11.9**	

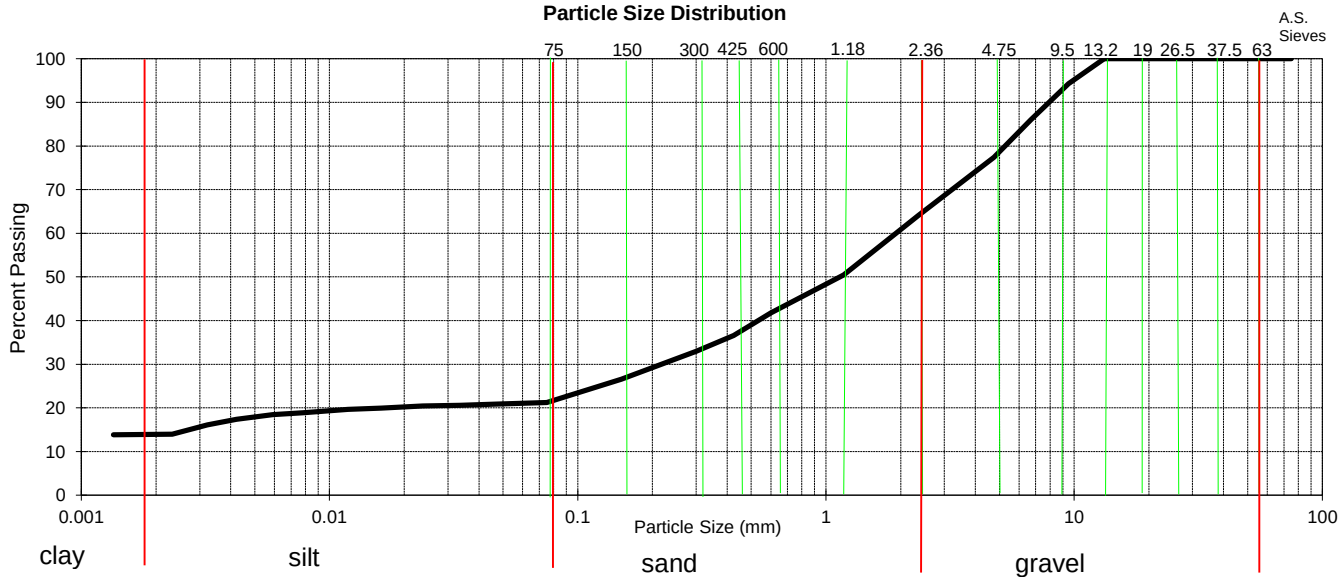
Sample History:	Oven Dried
Preparation Method:	Dry sieved
Cracking / Curling of linear shrinkage:	-
Linear shrinkage mould length:	0

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydrometer: g/l
sampled by client, tested as received.

Material properties

GRAVEL CONTENT =	**36**	%
SAND CONTENT =	**43**	%
SILT CONTENT =	**7**	%
CLAY CONTENT =	**14**	%



Date: 8/03/2022

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13 Brock Street Thomastown VIC 3074 **P** (03) 9464 4617 **Email** reception@groundscience.com.au

Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AC**
Lab Reference No.	**#S12**	Sample Identification:	**HB-TP02-C @ 2.4-2.5m**
Laboratory Specimen Classification:	**sandy GRAVEL, fine to intermediate grained, grey, fines of low plasticity, trace clay, trace silt**		

Particle Size Distribution AS1289 3.6.3

Sieve Size	% Passing	Specification
63 mm	**100**	
53 mm	**100**	
37.5 mm	**100**	
26.5 mm	**100**	
19.0 mm	**100**	
13.2 mm	**74**	
9.5 mm	**63**	
6.7 mm	**53**	
4.75 mm	**43**	
2.36 mm	**33**	
1.18 mm	**22**	
600 um	**16**	
425 um	**14**	
300 um	**12**	
150 um	**9**	
75 um	**7**	
hydrometer values		
46 um	**7**	
24 um	**6**	
16 um	**6**	
12 um	**6**	
8 um	**6**	
1 um	**4**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**ND**	
Plastic Limit	%	AS1289 3.2.1	**ND**	
Plasticity Index	%	AS1289 3.3.1	**ND**	
Linear Shrinkage	%	AS1289 3.4.1	**ND**	
Moisture Content	%	AS1289 2.1.1	**9.7**	

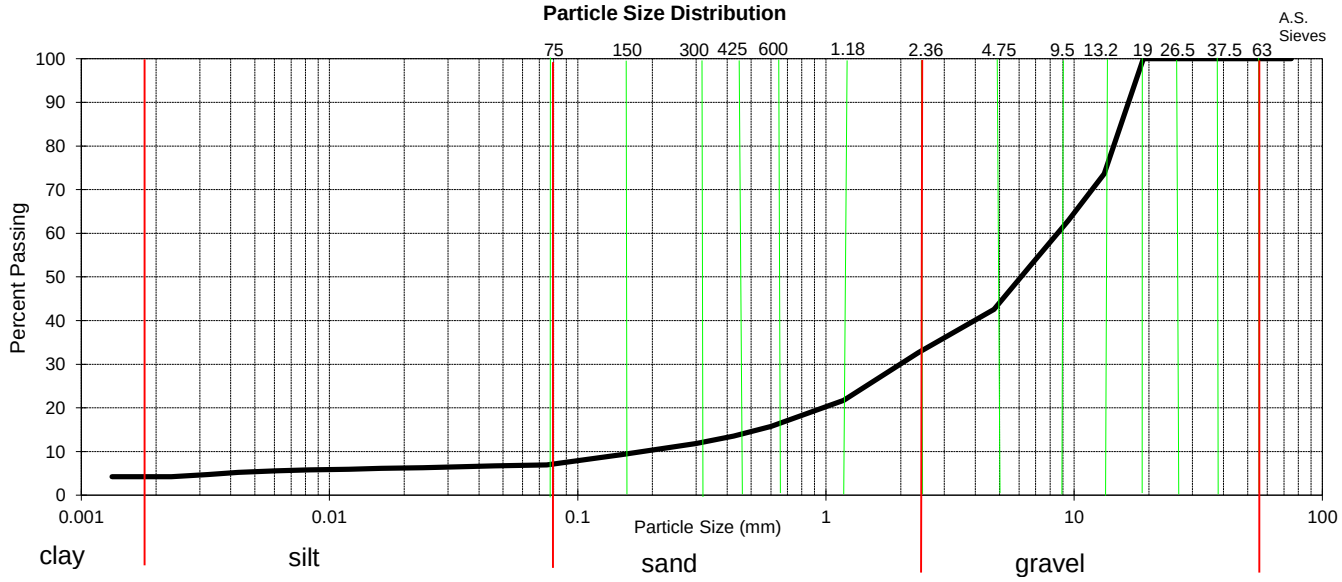
Sample History:	Oven Dried
Preparation Method:	Dry sieved
Cracking / Curling of linear shrinkage:	-
Linear shrinkage mould length:	0

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydrometer: g/l
sampled by client, tested as received.

Material properties

GRAVEL CONTENT =	**67**	%
SAND CONTENT =	**26**	%
SILT CONTENT =	**3**	%
CLAY CONTENT =	**4**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AG**

Lab Reference No.	**#S13**	Sample Identification:	**HB-TP03-C @ 2.0 - 2.5m**

Laboratory Specimen Classification: **clayey, sandy SILT, low plasticity, brown, sand fine to coarse grained, trace gravel**

Particle Size Distribution AS 1289 3.6.3

Sieve Size	% Passing	Specification
19.0 mm	**100**	
13.2 mm	**100**	
9.5 mm	**100**	
6.7 mm	**100**	
4.75 mm	**100**	
2.36 mm	**96**	
1.18 mm	**93**	
600 um	**90**	
425 um	**89**	
300 um	**87**	
150 um	**77**	
75 um	**63**	
hydrometer values		
41 um	**58**	
22 um	**50**	
15 um	**46**	
11 um	**44**	
7 um	**40**	
1 um	**10**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	-	
Plastic Limit	%	AS1289 3.2.1	-	
Plasticity Index	%	AS1289 3.3.1	-	
Linear Shrinkage	%	AS1289 3.4.1	-	
Moisture Content	%	AS1289 2.1.1	**12.3**	

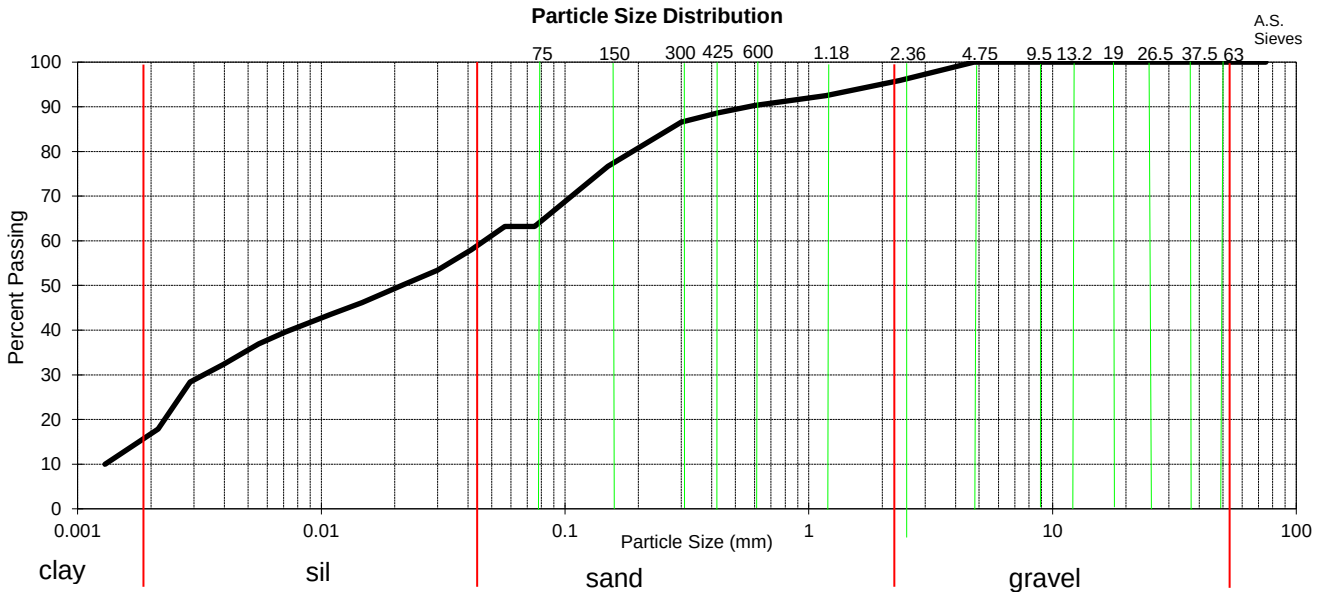
Sample History:	Air Dried
Preparation Method:	Dry sieved
Crumbling / Curling of linear shrinkage:	-
Linear shrinkage mould length:	-

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydromter: g/l

Material properties

GRAVEL CONTENT =	**4**	%
SAND CONTENT =	**33**	%
SILT CONTENT =	**46**	%
CLAY CONTENT =	**17**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AE**

Lab Reference No.	**#S17**	Sample Identification:	**HB-TP06-C @ 1.8-1.9m**

Laboratory Specimen Classification: **sandy SILT, low plasticity, brown, sand fine to coarse grained, with clay, trace gravel**

Particle Size Distribution AS 1289 3.6.3

Sieve Size	% Passing	Specification
19.0 mm	**100**	
13.2 mm	**100**	
9.5 mm	**100**	
6.7 mm	**100**	
4.75 mm	**100**	
2.36 mm	**88**	
1.18 mm	**77**	
600 um	**69**	
425 um	**66**	
300 um	**63**	
150 um	**57**	
75 um	**52**	
hydrometer values		
46 um	**51**	
23 um	**45**	
16 um	**43**	
12 um	**39**	
8 um	**37**	
1 um	**7**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**-**	
Plastic Limit	%	AS1289 3.2.1	**-**	
Plasticity Index	%	AS1289 3.3.1	**-**	
Linear Shrinkage	%	AS1289 3.4.1	**-**	
Moisture Content	%	AS1289 2.1.1	**16.3**	

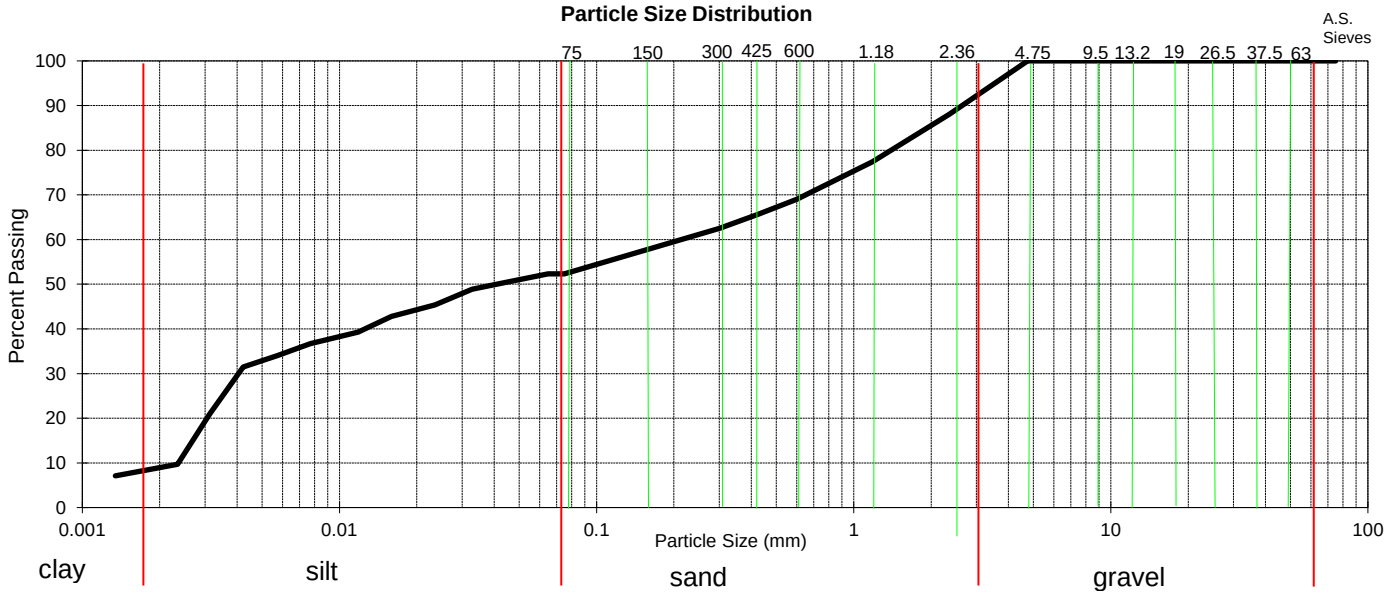
Sample History:	Air Dried
Preparation Method:	Dry sieved
Crumbling / Curling of linear shrinkage:	-
Linear shrinkage mould length:	-

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydromter: g/l

Material properties

GRAVEL CONTENT =	**12**	%
SAND CONTENT =	**36**	%
SILT CONTENT =	**43**	%
CLAY CONTENT =	**9**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AF**

Lab Reference No.	**#S19**	Sample Identification:	**HB-TP07-C @ 0.35 - 0.5m**
Laboratory Specimen Classification:	**clayey GRAVEL, fine to coarse grained, brown, fines of low plasticity, with sand, with silt**		

Particle Size Distribution AS1289 3.6.3

Sieve Size	% Passing	Specification
63 mm	**100**	
53 mm	**100**	
37.5 mm	**87**	
26.5 mm	**82**	
19.0 mm	**76**	
13.2 mm	**74**	
9.5 mm	**70**	
6.7 mm	**66**	
4.75 mm	**62**	
2.36 mm	**54**	
1.18 mm	**47**	
600 um	**42**	
425 um	**40**	
300 um	**37**	
150 um	**32**	
75 um	**28**	
hydrometer values		
41 um	**27**	
22 um	**25**	
15 um	**24**	
11 um	**24**	
8 um	**23**	
1 um	**15**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**ND**	
Plastic Limit	%	AS1289 3.2.1	**ND**	
Plasticity Index	%	AS1289 3.3.1	**ND**	
Linear Shrinkage	%	AS1289 3.4.1	**ND**	
Moisture Content	%	AS1289 2.1.1	**7.0**	

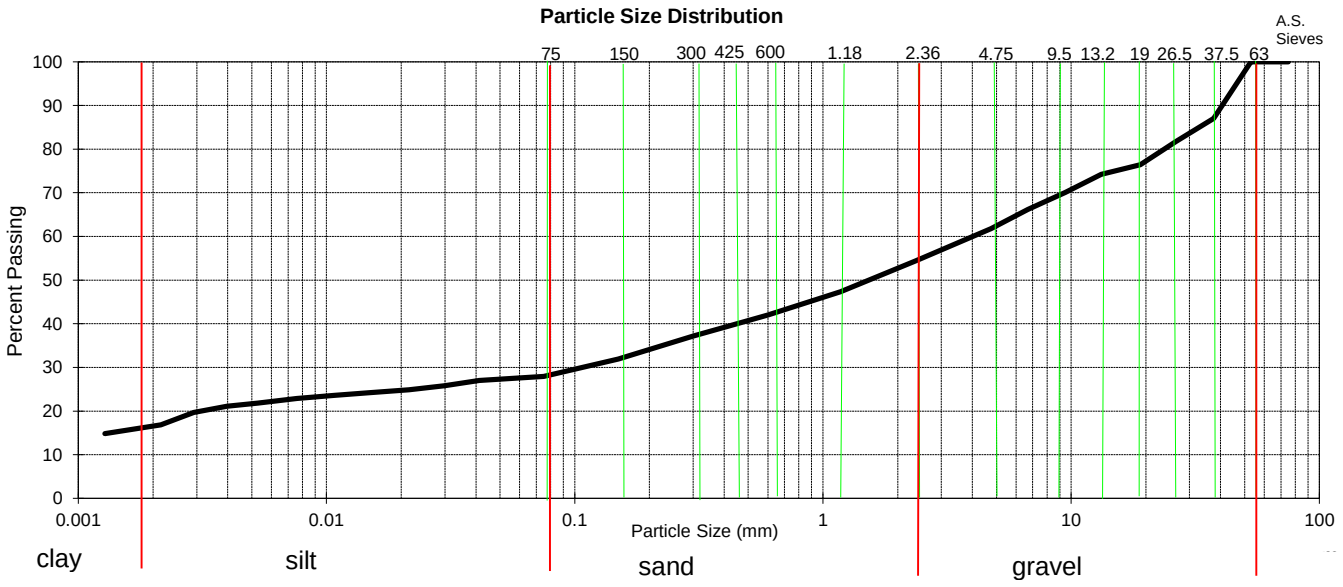
Sample History:	Oven Dried
Preparation Method:	Dry sieved
Cracking / Curling of linear shrinkage:	-
Linear shrinkage mould length:	0

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydrometer: g/l
sampled by client, tested as received.

Material properties

GRAVEL CONTENT =	**46**	%
SAND CONTENT =	**26**	%
SILT CONTENT =	**11**	%
CLAY CONTENT =	**17**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AG**

Lab Reference No.	**#S20**	Sample Identification:	**HB-TP07-C @ 1.8 - 2.0m**

Laboratory Specimen Classification: **gravelly SAND, fine to coarse grained, brown, with clay, trace silt**

Particle Size Distribution

AS1289 3.6.3

Sieve Size	% Passing	Specification
63 mm	**100**	
53 mm	**100**	
37.5 mm	**98**	
26.5 mm	**95**	
19.0 mm	**93**	
13.2 mm	**86**	
9.5 mm	**83**	
6.7 mm	**78**	
4.75 mm	**75**	
2.36 mm	**69**	
1.18 mm	**57**	
600 um	**48**	
425 um	**43**	
300 um	**38**	
150 um	**19**	
75 um	**16**	
hydrometer values		
48 um	**15**	
25 um	**14**	
17 um	**14**	
12 um	**14**	
9 um	**14**	
1 um	**12**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**ND**	
Plastic Limit	%	AS1289 3.2.1	**ND**	
Plasticity Index	%	AS1289 3.3.1	**ND**	
Linear Shrinkage	%	AS1289 3.4.1	**ND**	
Moisture Content	%	AS1289 2.1.1	**19.7**	

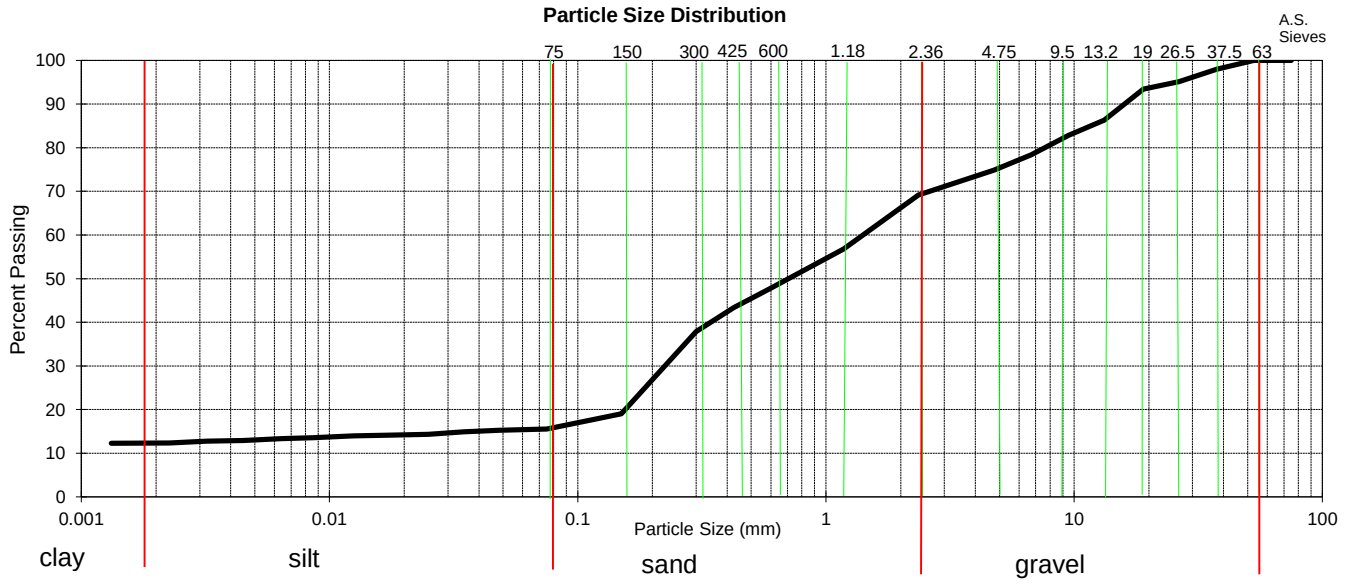
Sample History:	Oven Dried
Preparation Method:	Dry sieved
Cracking / Curling of linear shrinkage:	-
Linear shrinkage mould length:	0

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydrometer: g/l
sampled by client, tested as received.

Material properties

GRAVEL CONTENT =	**31**	%
SAND CONTENT =	**53**	%
SILT CONTENT =	**4**	%
CLAY CONTENT =	**12**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AH**

Lab Reference No.	**#S21**	Sample Identification:	**HB-TP08-C @ 1.0m**

Laboratory Specimen Classification: **silty CLAY, high plasticity, brown, with sand**

Particle Size Distribution AS 1289 3.6.3

Sieve Size	% Passing	Specification
19.0 mm	**100**	
13.2 mm	**100**	
9.5 mm	**100**	
6.7 mm	**100**	
4.75 mm	**100**	
2.36 mm	**100**	
1.18 mm	**99**	
600 um	**98**	
425 um	**98**	
300 um	**98**	
150 um	**94**	
75 um	**88**	
hydrometer values		
43 um	**83**	
22 um	**76**	
15 um	**73**	
11 um	**72**	
8 um	**71**	
1 um	**53**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**-**	
Plastic Limit	%	AS1289 3.2.1	**-**	
Plasticity Index	%	AS1289 3.3.1	**-**	
Linear Shrinkage	%	AS1289 3.4.1	**-**	
Moisture Content	%	AS1289 2.1.1	**55.3**	

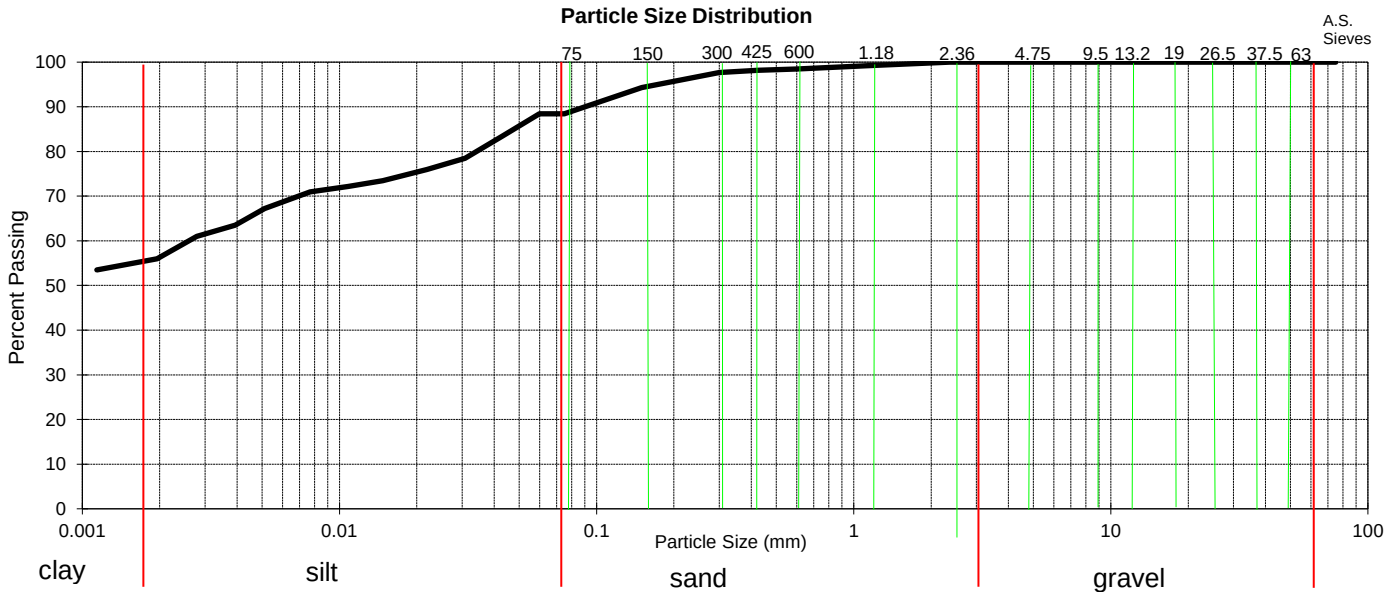
Sample History:	Air Dried
Preparation Method:	Dry sieved
Crumbling / Curling of linear shrinkage:	-
Linear shrinkage mould length:	-

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydromter: g/l

Material properties

GRAVEL CONTENT =	**0**	%
SAND CONTENT =	**12**	%
SILT CONTENT =	**32**	%
CLAY CONTENT =	**56**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AI**
Lab Reference No.	**#S24**	Sample Identification:	**HB-TP09-C @ 0.4 - 0.6m**
Laboratory Specimen Classification:			**silty sandy CLAY, medium plasticity, brown, sand fine to coarse grained, trace gravel**

Particle Size Distribution

AS1289 3.6.3

Sieve Size	% Passing	Specification
63 mm	**100**	
53 mm	**100**	
37.5 mm	**100**	
26.5 mm	**97**	
19.0 mm	**97**	
13.2 mm	**96**	
9.5 mm	**94**	
6.7 mm	**92**	
4.75 mm	**90**	
2.36 mm	**86**	
1.18 mm	**80**	
600 um	**74**	
425 um	**71**	
300 um	**67**	
150 um	**58**	
75 um	**50**	
hydrometer values		
45 um	**48**	
23 um	**44**	
16 um	**44**	
12 um	**43**	
7 um	**42**	
1 um	**35**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**ND**	
Plastic Limit	%	AS1289 3.2.1	**ND**	
Plasticity Index	%	AS1289 3.3.1	**ND**	
Linear Shrinkage	%	AS1289 3.4.1	**ND**	
Moisture Content	%	AS1289 2.1.1	**14.0**	

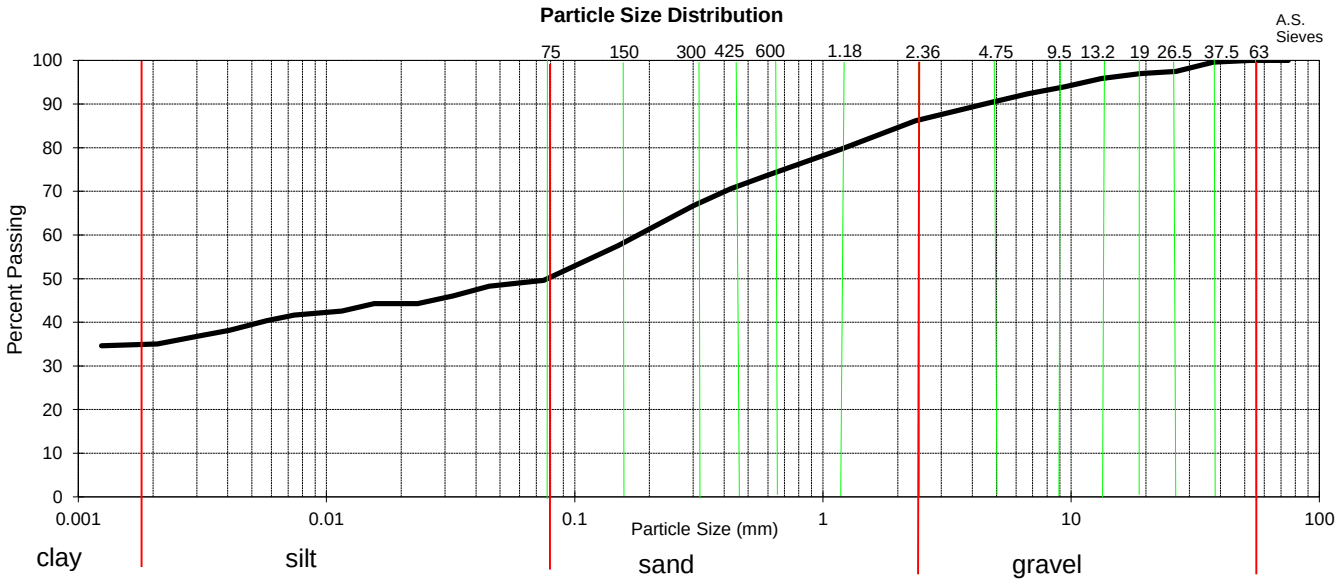
Sample History:	Oven Dried
Preparation Method:	Dry sieved
Cracking / Curling of linear shrinkage:	-
Linear shrinkage mould length:	0

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydrometer: g/l
sampled by client, tested as received.

Material properties

GRAVEL CONTENT =	**14**	%
SAND CONTENT =	**36**	%
SILT CONTENT =	**15**	%
CLAY CONTENT =	**35**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AJ**

Lab Reference No.	**#S25**	Sample Identification:	**HB-BH01-C @ 0.5 - 0.75m**

Laboratory Specimen Classification: **SAND, fine to coarse grained, brown, trace silt**

Particle Size Distribution AS 1289 3.6.3

Sieve Size	% Passing	Specification
19.0 mm	**100**	
13.2 mm	**100**	
9.5 mm	**100**	
6.7 mm	**100**	
4.75 mm	**100**	
2.36 mm	**100**	
1.18 mm	**100**	
600 um	**79**	
425 um	**34**	
300 um	**6**	
150 um	**2**	
75 um	**2**	
hydrometer values		
55 um	**1**	
27 um	**1**	
19 um	**1**	
14 um	**1**	
9 um	**1**	
1 um	**0**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**-**	
Plastic Limit	%	AS1289 3.2.1	**-**	
Plasticity Index	%	AS1289 3.3.1	**-**	
Linear Shrinkage	%	AS1289 3.4.1	**-**	
Moisture Content	%	AS1289 2.1.1	**2.7**	

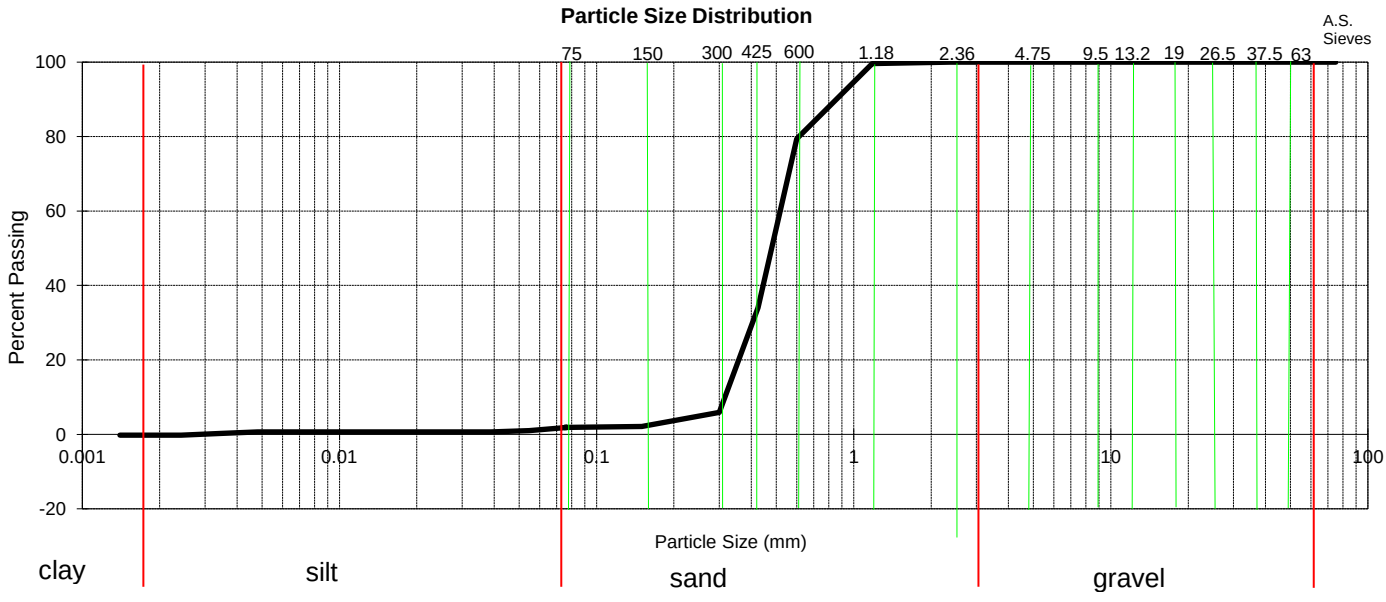
Sample History:	Air Dried
Preparation Method:	Dry sieved
Crumbling / Curling of linear shrinkage:	-
Linear shrinkage mould length:	-

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydromter: g/l

Material properties

GRAVEL CONTENT =	**0**	%
SAND CONTENT =	**99**	%
SILT CONTENT =	**1**	%
CLAY CONTENT =	**0**	%



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Particle Size Distribution & Hydrometer

Client:	**JACOBS (MELBOURNE)**	Job No.	**GS6209/1**
Project:	**PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION**	Date:	**1-Mar-22**
Location:	**-**	Report No.	**AK**

Lab Reference No.	**#S30**	Sample Identification:	**HB-BH02-C @ 0.5 - 0.75m**

Laboratory Specimen Classification: **SAND, fine to coarse grained, brown, trace silt**

Particle Size Distribution AS 1289 3.6.3

Sieve Size	% Passing	Specification
19.0 mm	**100**	
13.2 mm	**100**	
9.5 mm	**100**	
6.7 mm	**100**	
4.75 mm	**100**	
2.36 mm	**100**	
1.18 mm	**100**	
600 um	**93**	
425 um	**64**	
300 um	**14**	
150 um	**2**	
75 um	**1**	
hydrometer values		
55 um	**1**	
27 um	**0**	
19 um	**0**	
14 um	**0**	
9 um	**0**	
1 um	**0**	

Consistency Limits and Moisture Content

Test		Method	Result	Spec.
Liquid Limit	%	AS1289 3.1.2	**-**	
Plastic Limit	%	AS1289 3.2.1	**-**	
Plasticity Index	%	AS1289 3.3.1	**-**	
Linear Shrinkage	%	AS1289 3.4.1	**-**	
Moisture Content	%	AS1289 2.1.1	**3.7**	

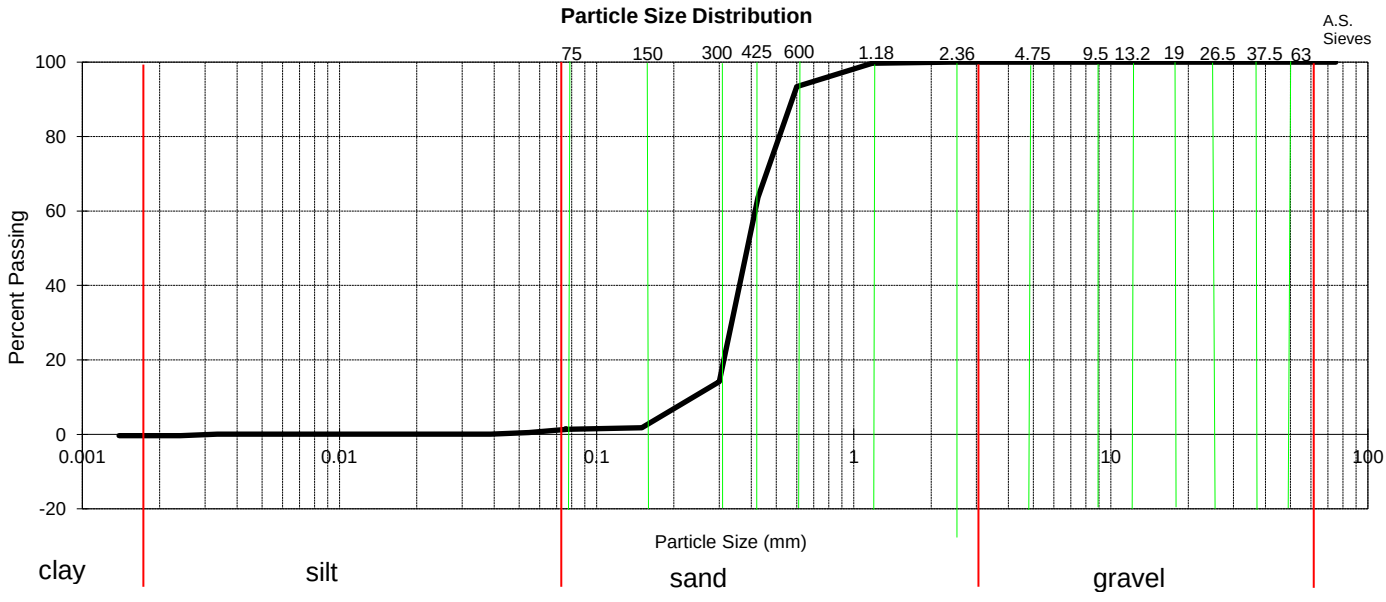
Sample History:	Air Dried
Preparation Method:	Dry sieved
Crumbling / Curling of linear shrinkage:	-
Linear shrinkage mould length:	-

ND = not determined NO = not obtainable NP = non plastic

Notes Dispersion : mechanical / hydromter: g/l

Material properties

GRAVEL CONTENT =	**0**	%
SAND CONTENT =	**99**	%
SILT CONTENT =	**1**	%
CLAY CONTENT =	**0**	%



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Date: 9/03/2022

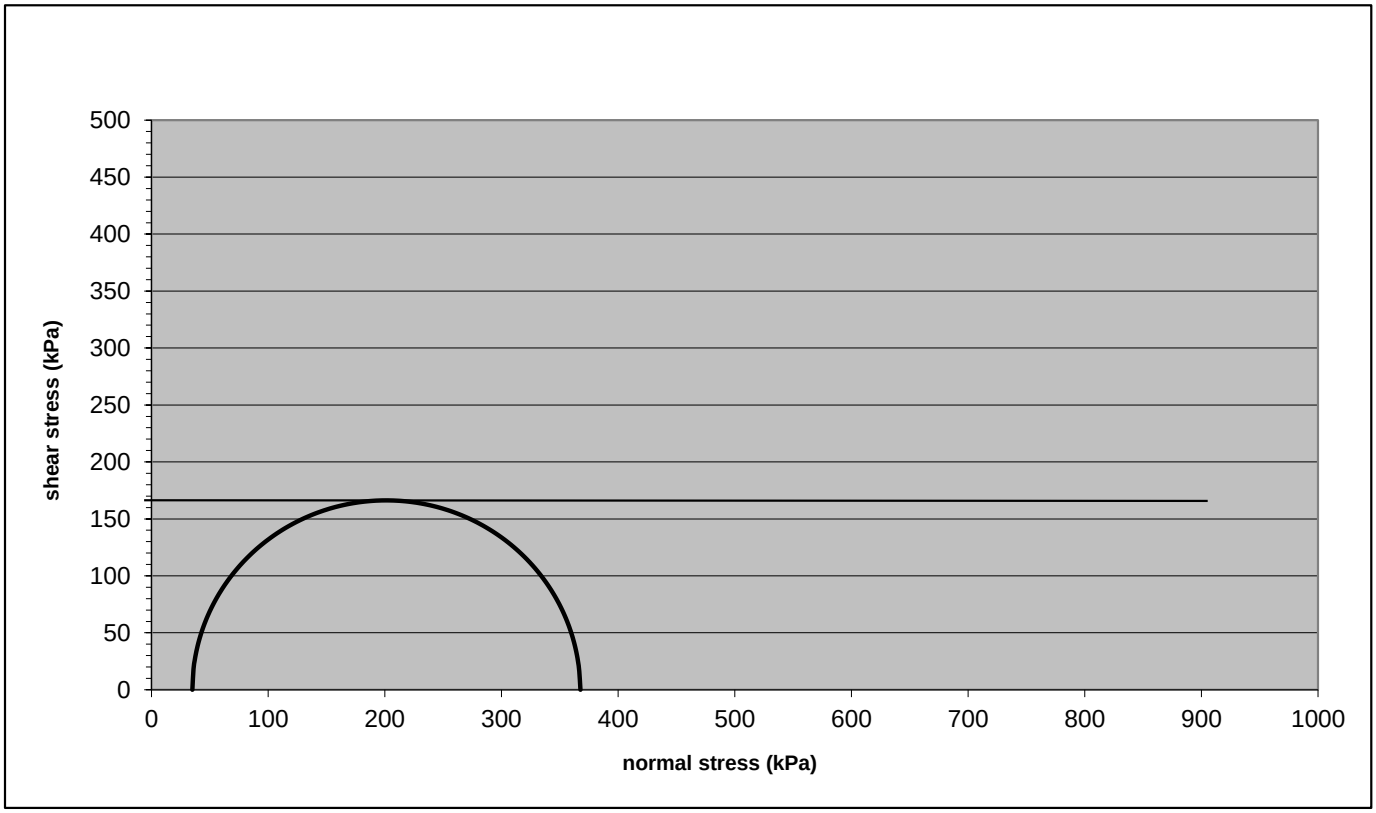
Pelin Atas Erden
Approved Signatory

Ground Science
A C N 105 704 078
13 Brock Street Thomastown VIC, P 03 9464 4617 F 03 9464 4618

UU TRIAXIAL - Unconsolidated Undrained Single Stage

client :	JACOBS (MELBOURNE)	job No. :	GS6209/1
principal :	-	report No :	AL
project :	PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION (HEYBRIDGE)	test date :	9/03/2022
location :	IS360318	Page :	1 of 2

borehole:	HB-BH01-C	sample type:	Undisturbed	test type:	UU	test procedure:	AS 1289 6.4.1
sample No.	#S2	client ref:	-	normal stress:	35		
depth (m):	1.50 - 1.80	sample size (mm):	126.36	x	63.64	date of sampling:	Sampled by client



Stage	Deviator Stress kPa (σ1-σ3)	Peak lateral stress kPa (σ3)	Peak axial stress kPa (σ1)	Strain @ failure %
1	333	35	368	332.5

Undrained cohesion: **166 kPa**

failure criteria: maximum deviator stress

failure mode : Shear failure

sample description : clayey sandy, SILT, low to medium plasticity, grey, sand fine to coarse grained

Notes :
1. Mohrs circles are a graphical presentation of the results and are not to scale
2. Tested as received

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Approved Signatory

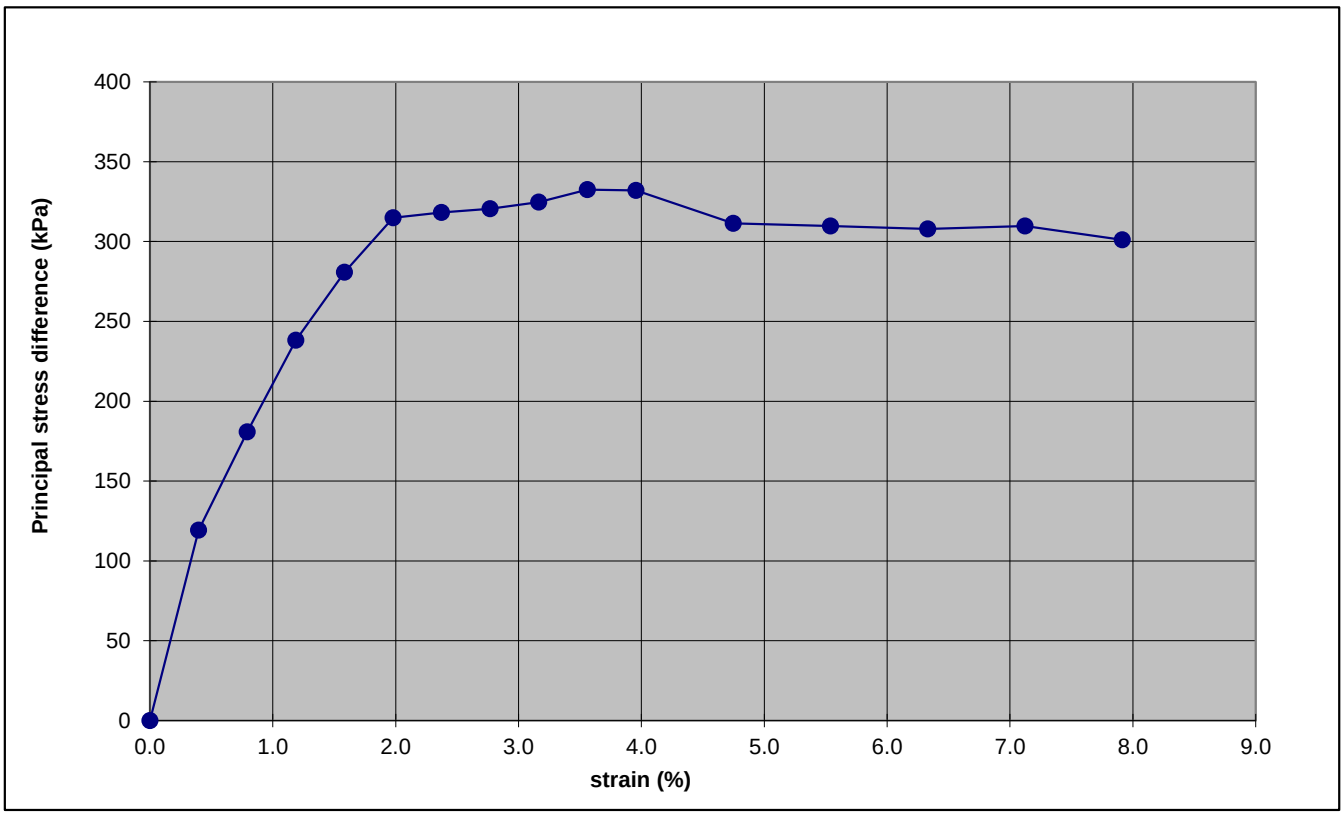
Date: 10-Mar-22

Ground Science
A C N 105 704 078
13 Brock Street Thomastown VIC, P 03 9464 4617 F 03 9464 4618

UU TRIAXIAL - Unconsolidated Undrained Single Stage

client :	JACOBS (MELBOURNE)	job No. :	GS6209/1
principal :	-	report No :	AL
project :	PROJECT MARINUS - HEYBRIDGE SITE INVESTIGATION (HEYBRIDGE)	test date :	9/03/2022
location :	IS360318	page :	2 of 2

borehole:	HB-BH01-C	sample type:	Undisturbed	test type:	UU	test procedure:	AS 1289 6.4.1
sample No.	#S2	client ref:	-	normal stress:	35		
depth (m):	1.50 - 1.80	sample size (mm):	126.36	x	63.64	date of sampling:	Sampled by client



Stage	Strain rate %/min
1	1.000

Speciman after test

		Specific gravity	2.65 (assumed)
initial dry density :	2.04 t/m^3	**Degree of Saturation**	96.62 %
mositure content :	11.0 % (before test)	10.7 % (after test)	

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Date: 10-Mar-22

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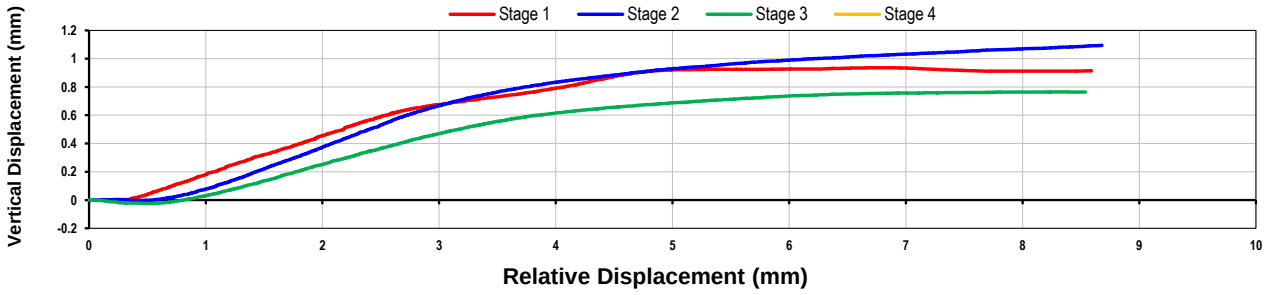
DIRECT SHEAR TEST REPORT

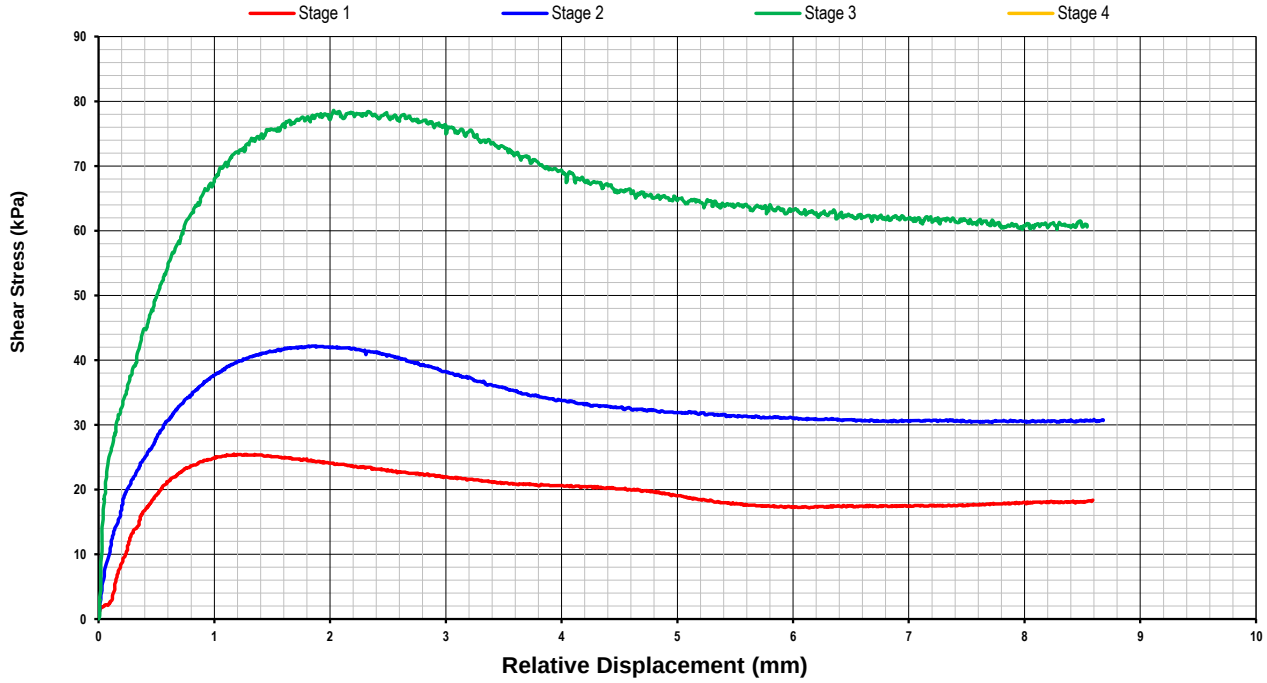
Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS
		Workorder No	0009647
Address	13 Brock Street Thomastown VIC 3074	**Test Date**	4/04/2022
		Report Date	7/04/2022
Project	GS6209/1 (WR 7136) - Project Marinus - IS360318		
Client ID	#11 - HB-TP02-C	**Depth (m)**	0.90-1.10
Description	SILTY SAND, some clay fines - grey/ black		
Sample Type	Three individual soil specimens - Remoulded to 98% of MDD @ 100% of OMC as requested by client.		

Vertical Displacement/Relative Displacement Plot



Shear Stress/Displacement Plot



Notes/Remarks: Tested As Requested

Note: Area correction based on square sample equation.

Graph not to scale

Sample/s supplied by the client

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Authorised Signatory

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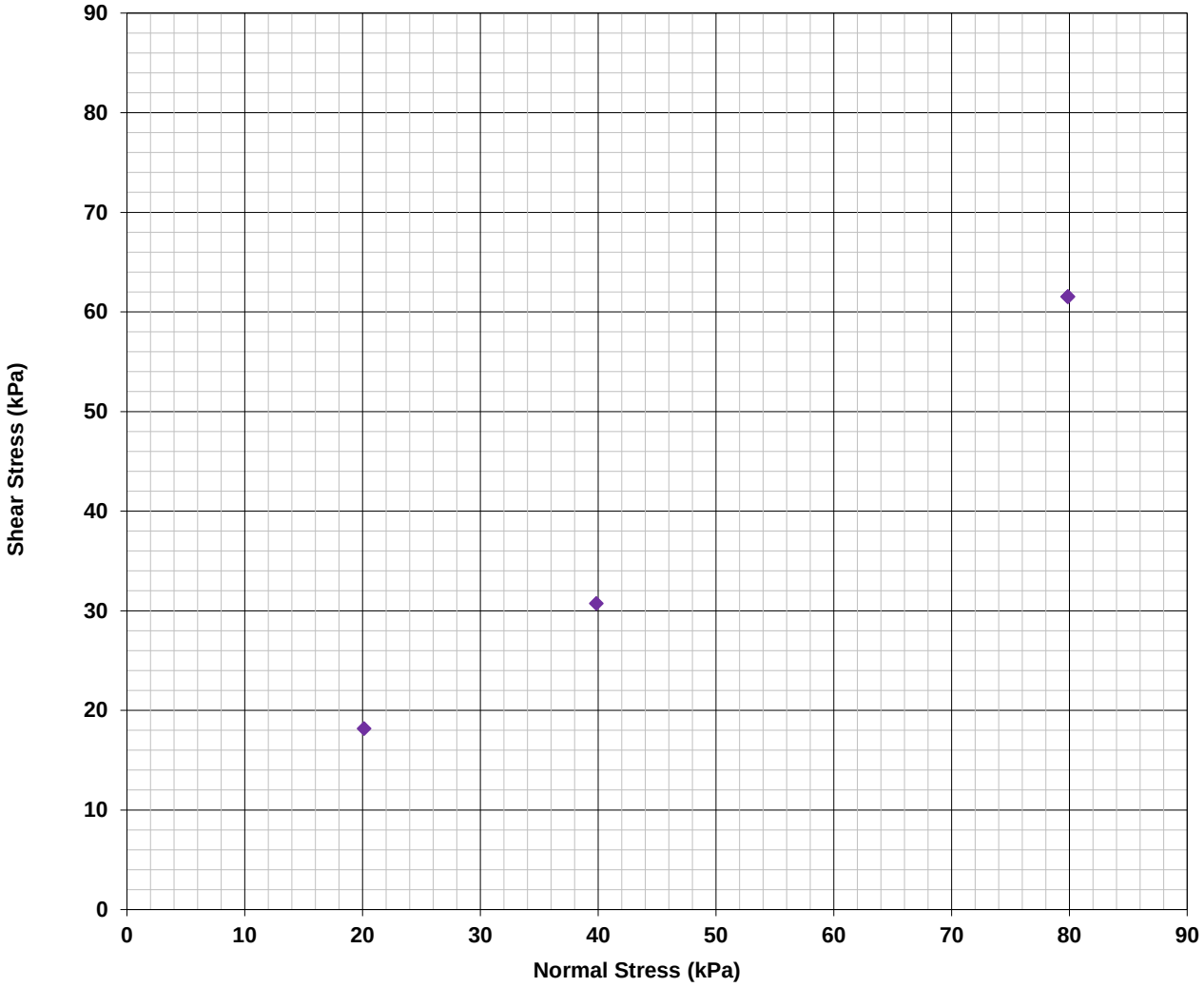
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS

Failure Criteria **Residual @ 8.5 , 8.5 , 8.5 , mm Displacement**

Residual - Normal Stress vs Shear Stress



Shear Angle (°)	**36.2**	**Cohesion (kPa)**	**2.7**	**R^2**	**0.999**
Specimen Condition	Inundated	Normal Stress (kPa)		Corrected Shear Stress (kPa)	
Specimen Dimensions (mm)	100.0	Stage 1	20.1	18.2	
Initial Height (mm)	42.0	Stage 2	39.8	30.7	
Rate of Strain (mm/min)	0.008	Stage 3	79.9	61.5	
Initial Moisture Content (%)	14.9				
Initial Wet Density(t/m^3)	2.02				
Initial Dry Density(t/m^3)	1.76				

Graph not to scale

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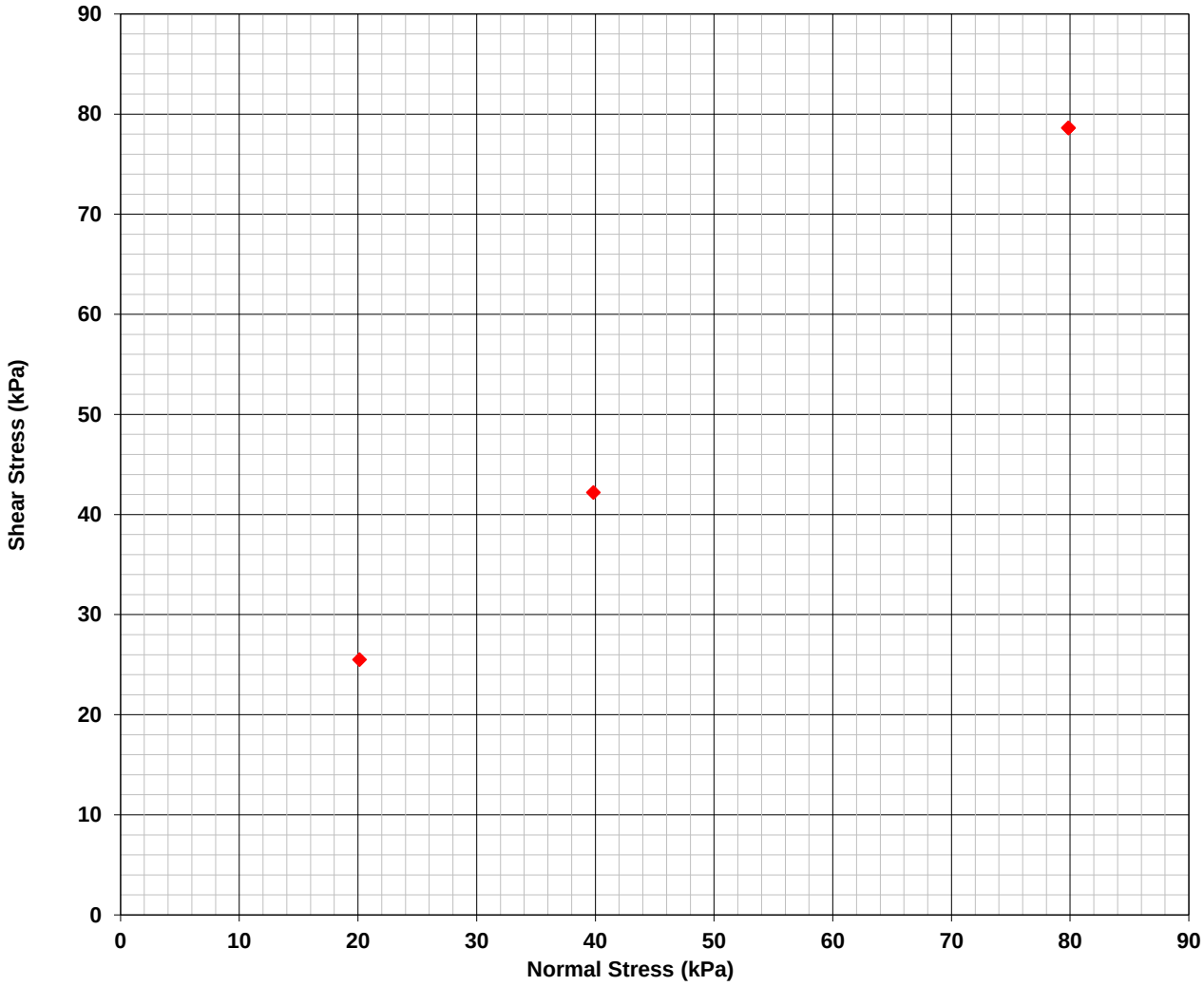
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS

Failure Criteria **Peak**

Peak - Normal Stress vs Shear Stress



Shear Angle (°) 41.7		**Cohesion (kPa)** 7.2		**R^2** 1.000
Specimen Condition	Inundated	Normal Stress (kPa)		Corrected Shear Stress (kPa)
Specimen Dimensions (mm)	100.0	Stage 1	20.1	25.5
Initial Height (mm)	42.0	Stage 2	39.8	42.2
Rate of Strain (mm/min)	0.008	Stage 3	79.9	78.6
Initial Moisture Content (%)	14.9			
Initial Wet Density(t/m^3)	2.02			
Initial Dry Density(t/m3)	1.76			

Graph not to scale

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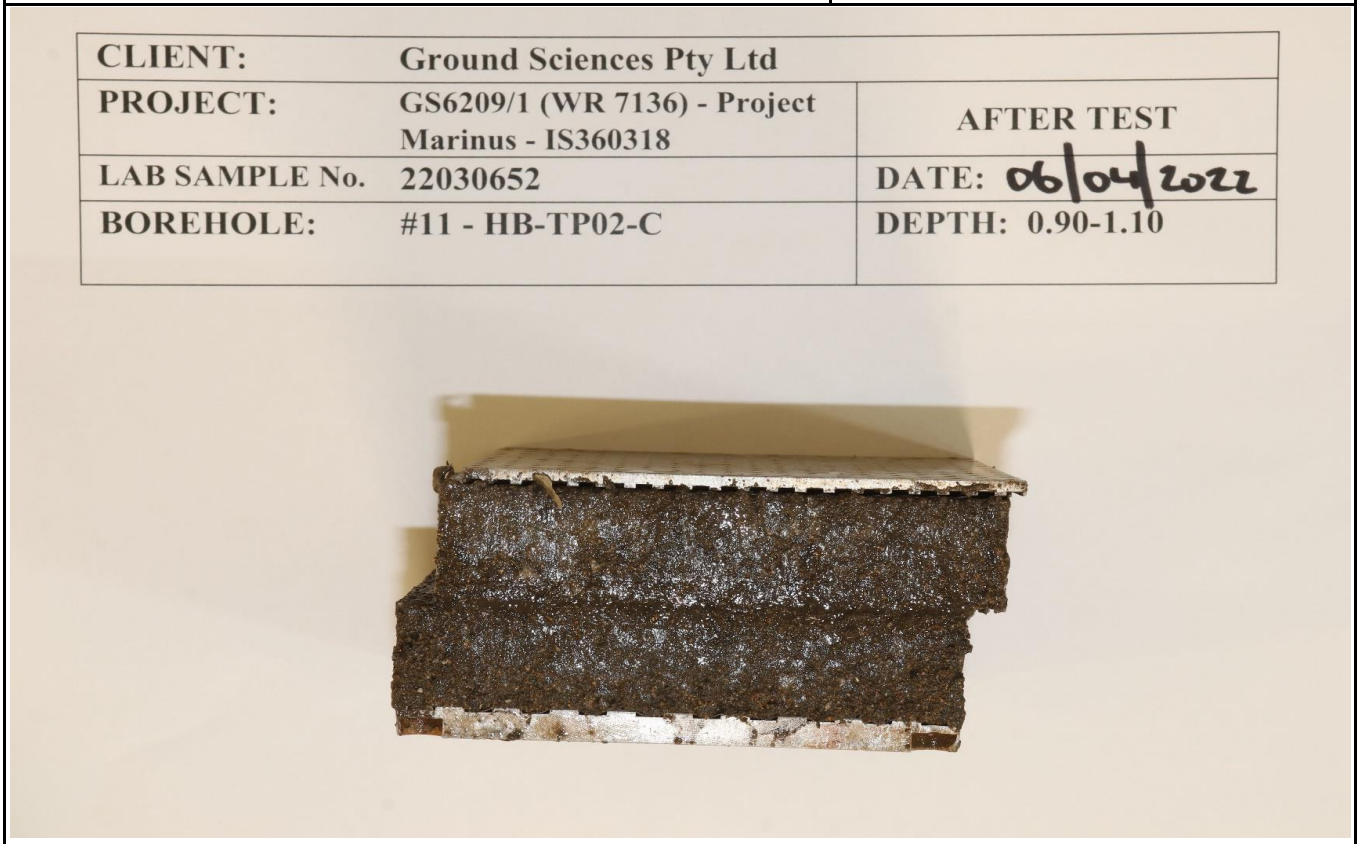
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS



Notes/Remarks:

Photo not to scale

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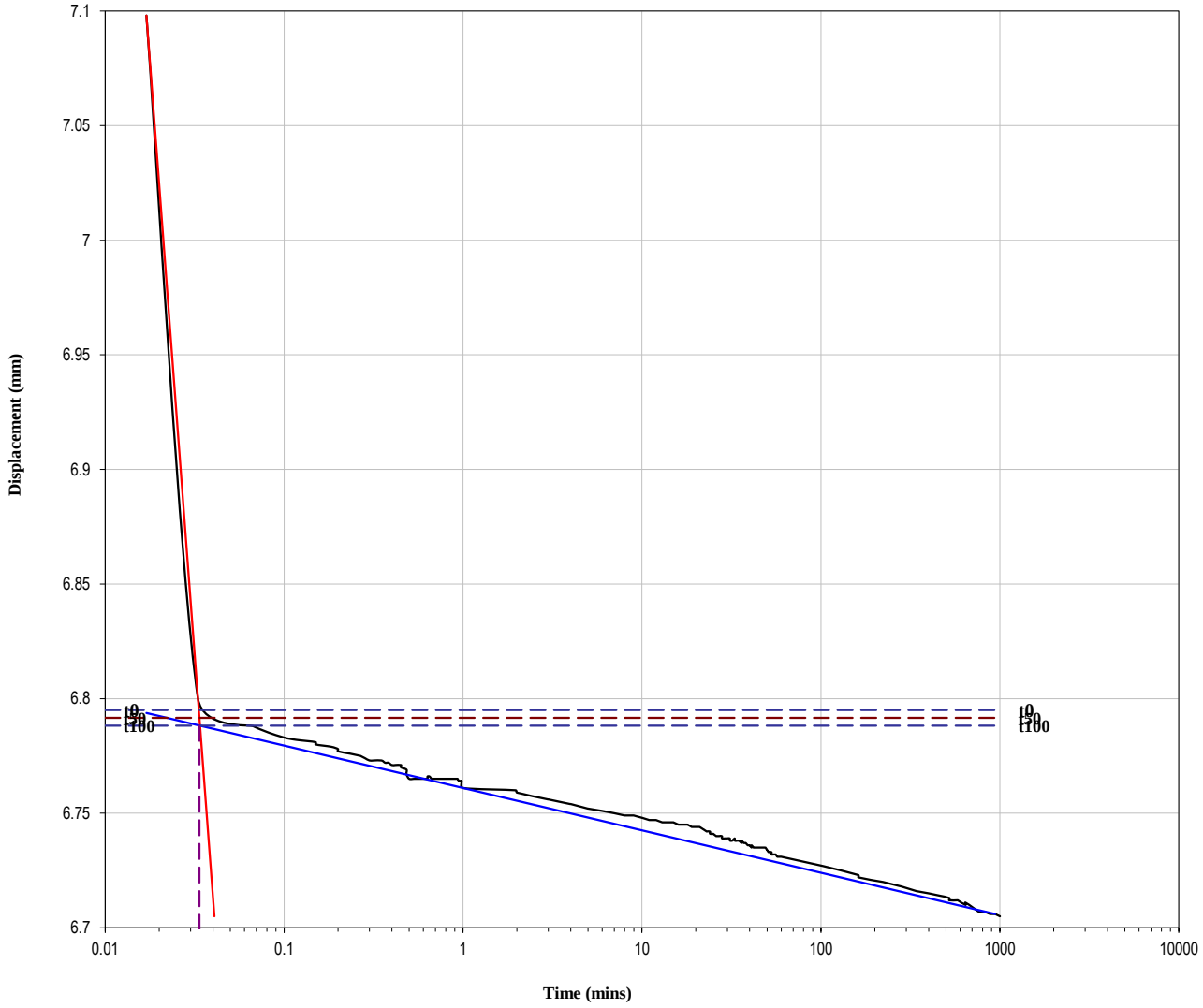
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS

Stage 1 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.03	**mins**
t_{100}	0.03	**mins**
Time to Failure =	339.58	**mins**
Estimated Displacement to Failure =	5	**mm**
Displacement Rate =	0.0147241	**mm/min**

Notes/Remarks:

Graph not to scale

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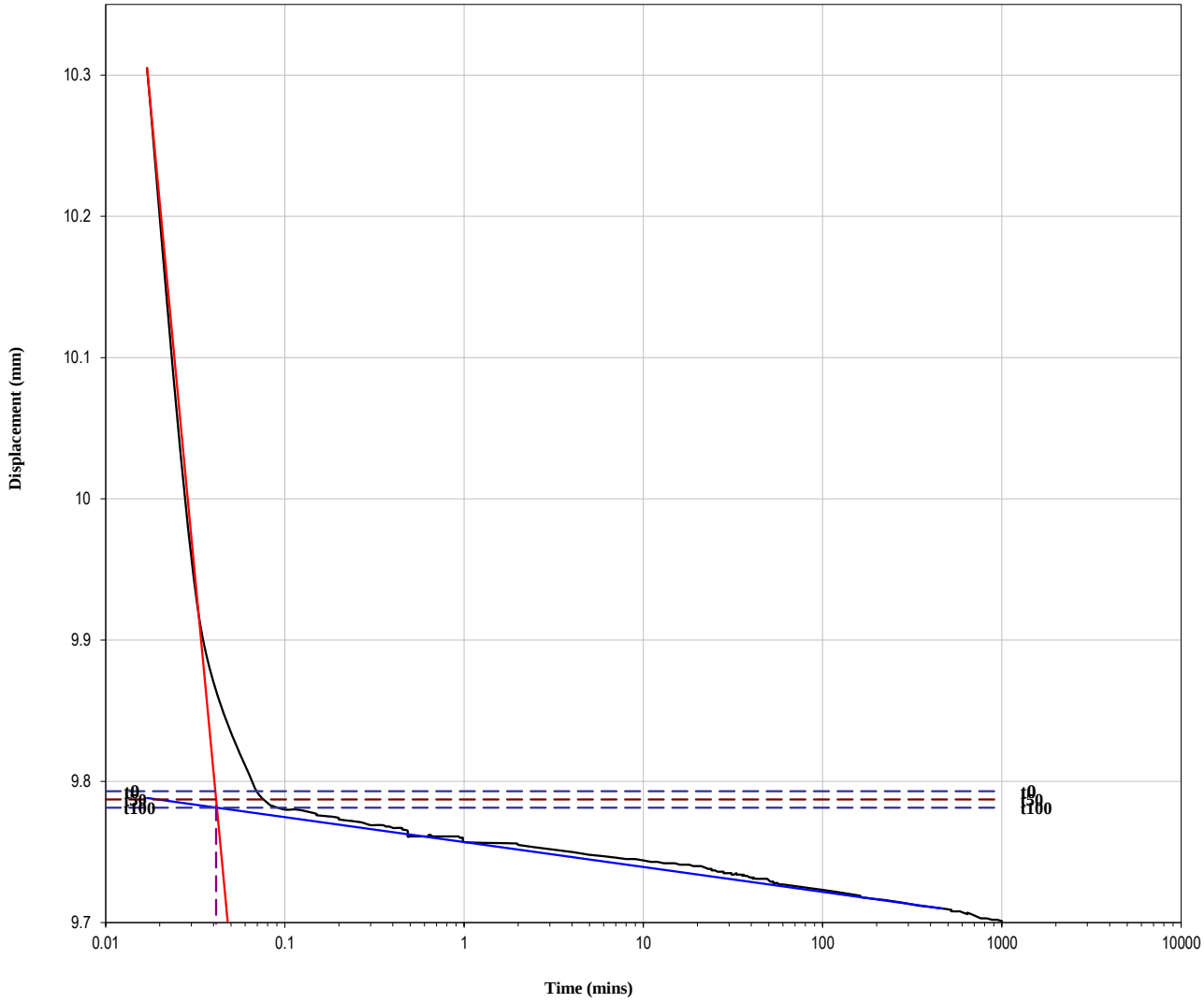
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS

Stage 2 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.04	mins
t_{100}	0.04	mins
Time to Failure =	489.36	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0102175	mm/min

Notes/Remarks:

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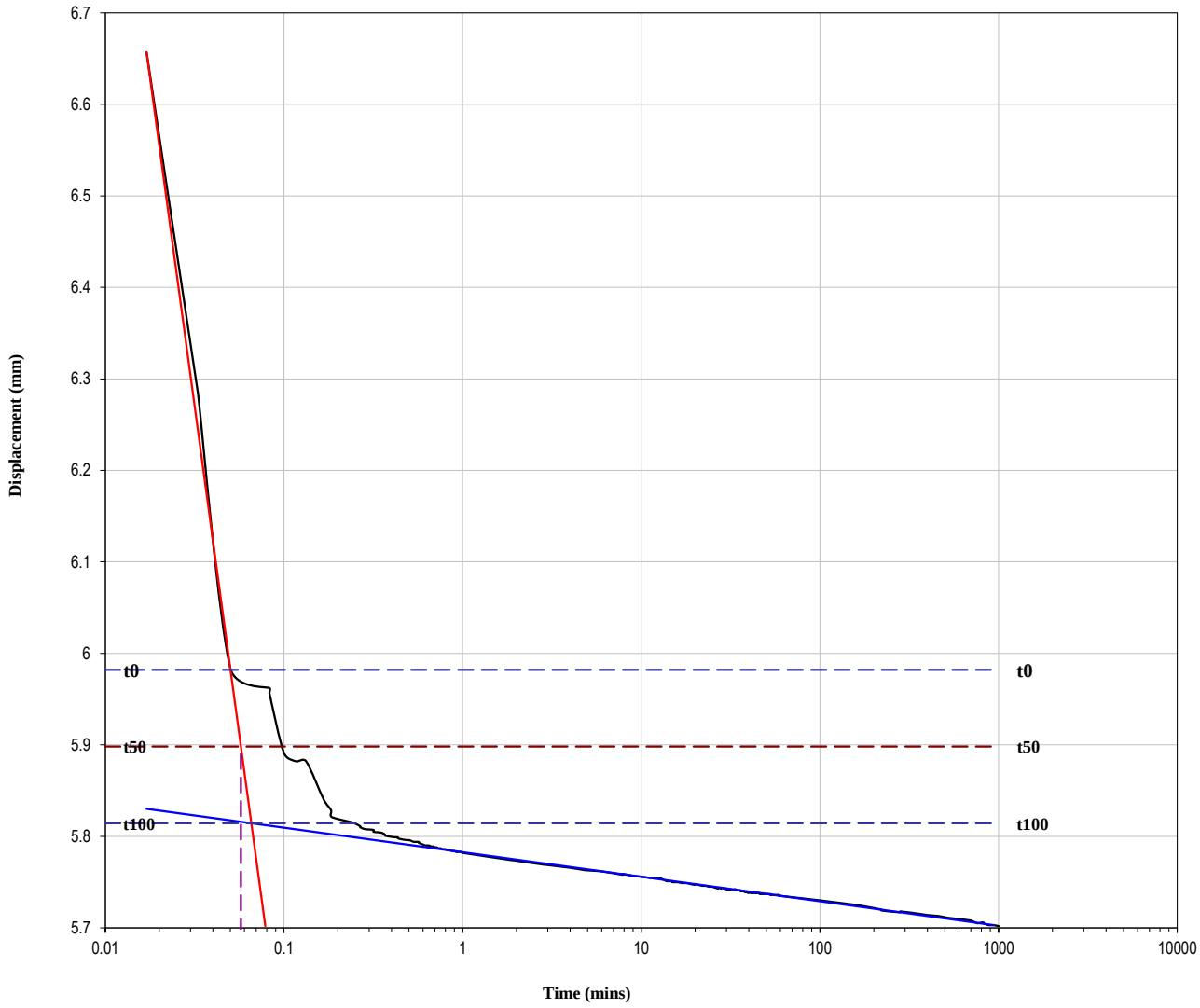
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030652- DS

Stage 3 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.06	mins
t_{100}	0.07	mins
Time to Failure =	294.91	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0169544	mm/min

Notes/Remarks:

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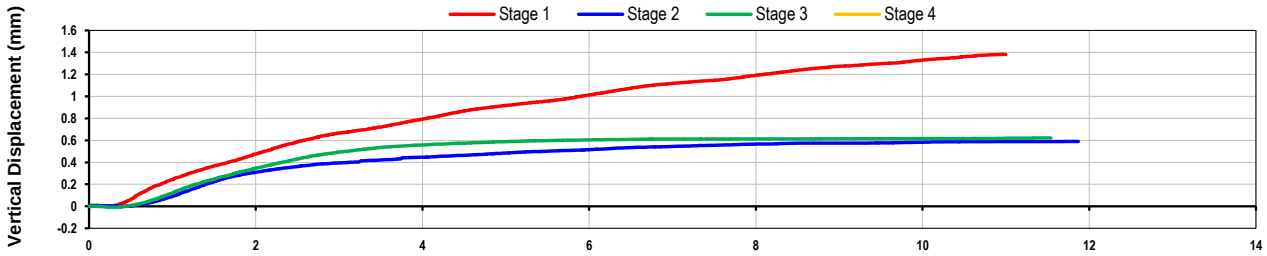
DIRECT SHEAR TEST REPORT

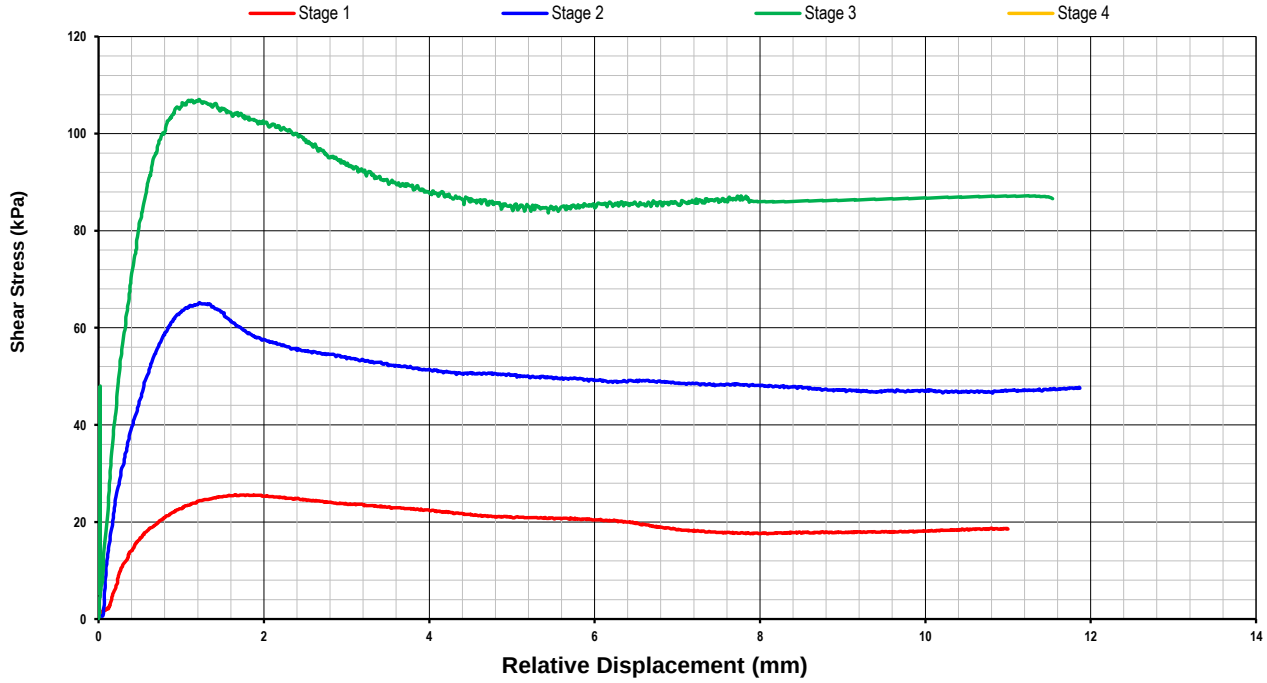
Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS
		Workorder No	0009647
Address	13 Brock Street Thomastown VIC 3074	**Test Date**	6/04/2022
		Report Date	11/04/2022
Project	GS6209/1 (WR 7136) - Project Marinus - IS360318		
Client ID	#14 - HB-TP04-C	**Depth (m)**	1.50-1.90
Description	-		
Sample Type	Three individual soil specimens - Remoulded to 98% of MDD @ 100% of OMC as requested by client.		

Vertical Displacement/Relative Displacement Plot



Shear Stress/Displacement Plot



Notes/Remarks: Tested As Requested

Note: Area correction based on square sample equation.

Graph not to scale

Sample/s supplied by the client

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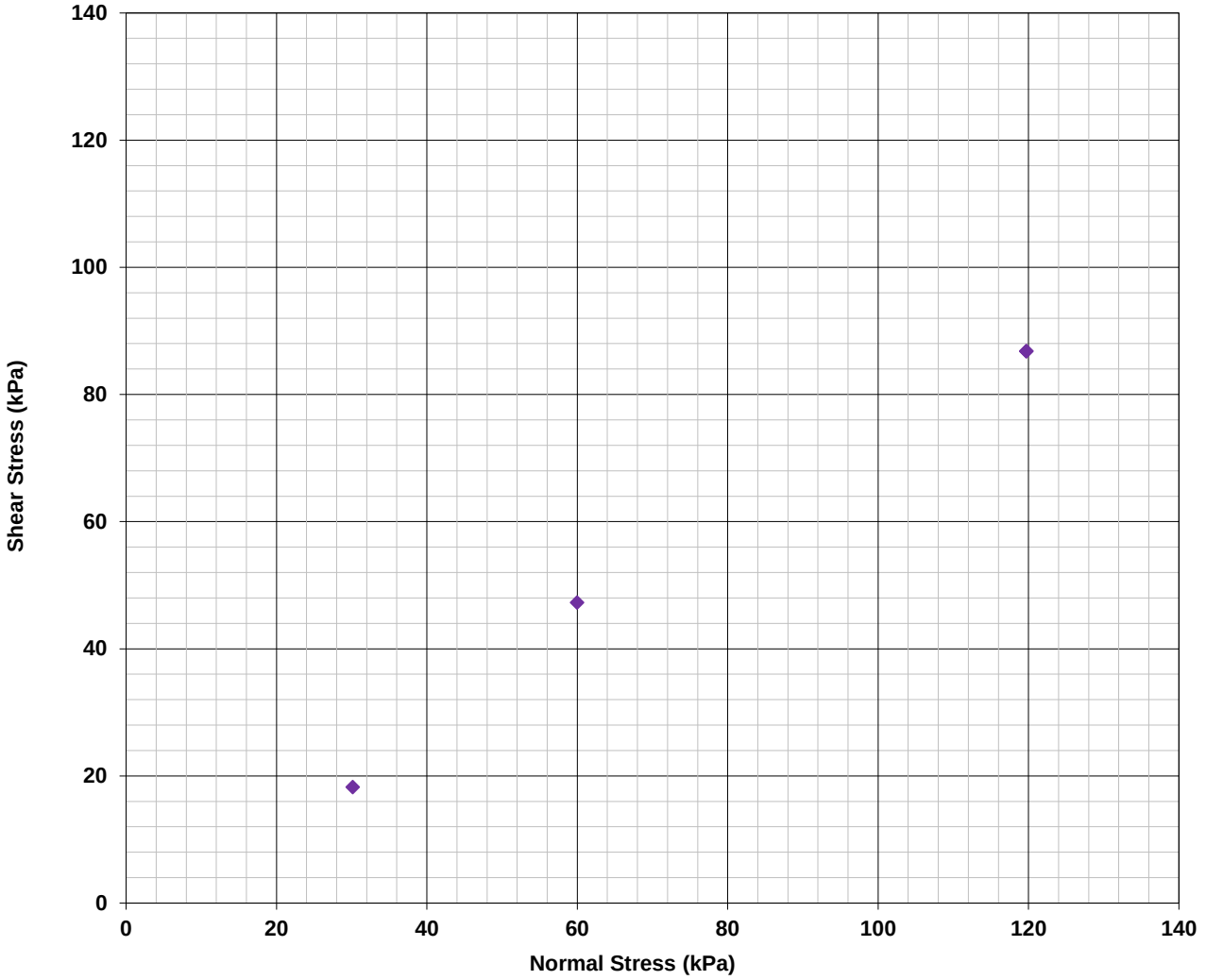
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS

Failure Criteria **Residual @ 10 , 10 , 10 , mm Displacement**

Residual - Normal Stress vs Shear Stress



Shear Angle (°)	36.9	Cohesion (kPa)	-1.7	R^2	0.995

Specimen Condition	Inundated	Normal Stress (kPa)		Corrected Shear Stress (kPa)
Specimen Dimensions (mm)	100.0	Stage 1	30.1	18.2
Initial Height (mm)	42.0	Stage 2	60.0	47.2
Rate of Strain (mm/min)	0.008	Stage 3	119.7	86.8
Initial Moisture Content (%)	7.1			
Initial Wet Density(t/m^3)	2.01			
Initial Dry Density(t/m^3)	1.88			

Graph not to scale

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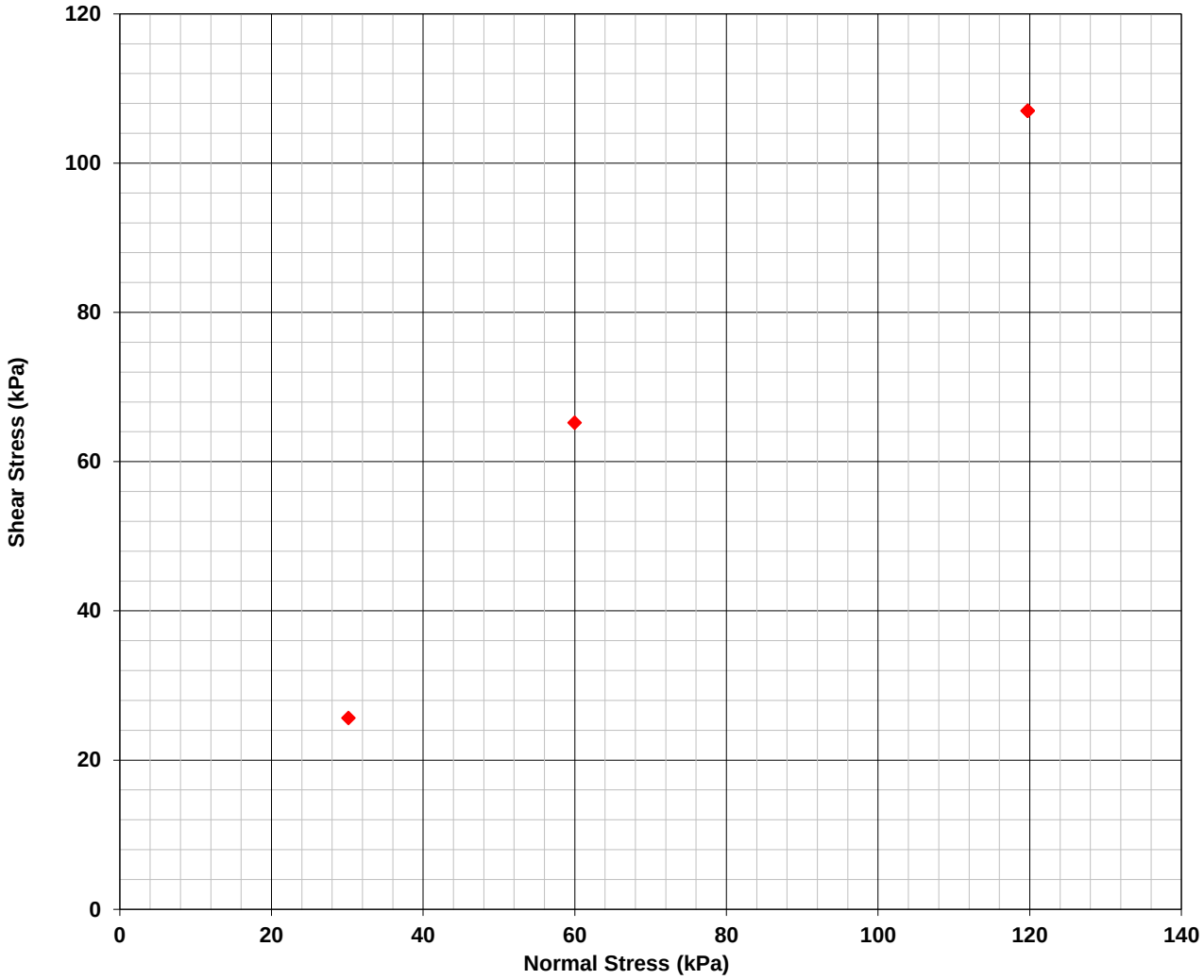
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS

Failure Criteria **Peak**

Peak - Normal Stress vs Shear Stress



Shear Angle (°) 41.3		Cohesion (kPa) 4.5		R^2 0.985
Specimen Condition	Inundated	Normal Stress (kPa)		Corrected Shear Stress (kPa)
Specimen Dimensions (mm)	100.0	Stage 1	30.1	25.6
Initial Height (mm)	42.0	Stage 2	60.0	65.2
Rate of Strain (mm/min)	0.008	Stage 3	119.7	107.0
Initial Moisture Content (%)	7.1			
Initial Wet Density(t/m^3)	2.01			
Initial Dry Density(t/m3)	1.88			

Graph not to scale

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DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS

Notes/Remarks:

Photo not to scale

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Tested at Trilab Brisbane Laboratory

Authorised Signatory

C. Channon

NATA WORLD RECOGNISED ACCREDITATION

Laboratory No. 9926

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Trilab Pty Ltd ABN 25 065 630 506

ACCURATE QUALITY RESULTS FOR TOMORROW'S ENGINEERING

Trilab
Soil Rock Calibration

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346A Bilsen Road,
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QLD 4034
Ph: +61 7 3265 5656

Perth
2 Kimmer Place,
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Ph: +61 8 9258 8323

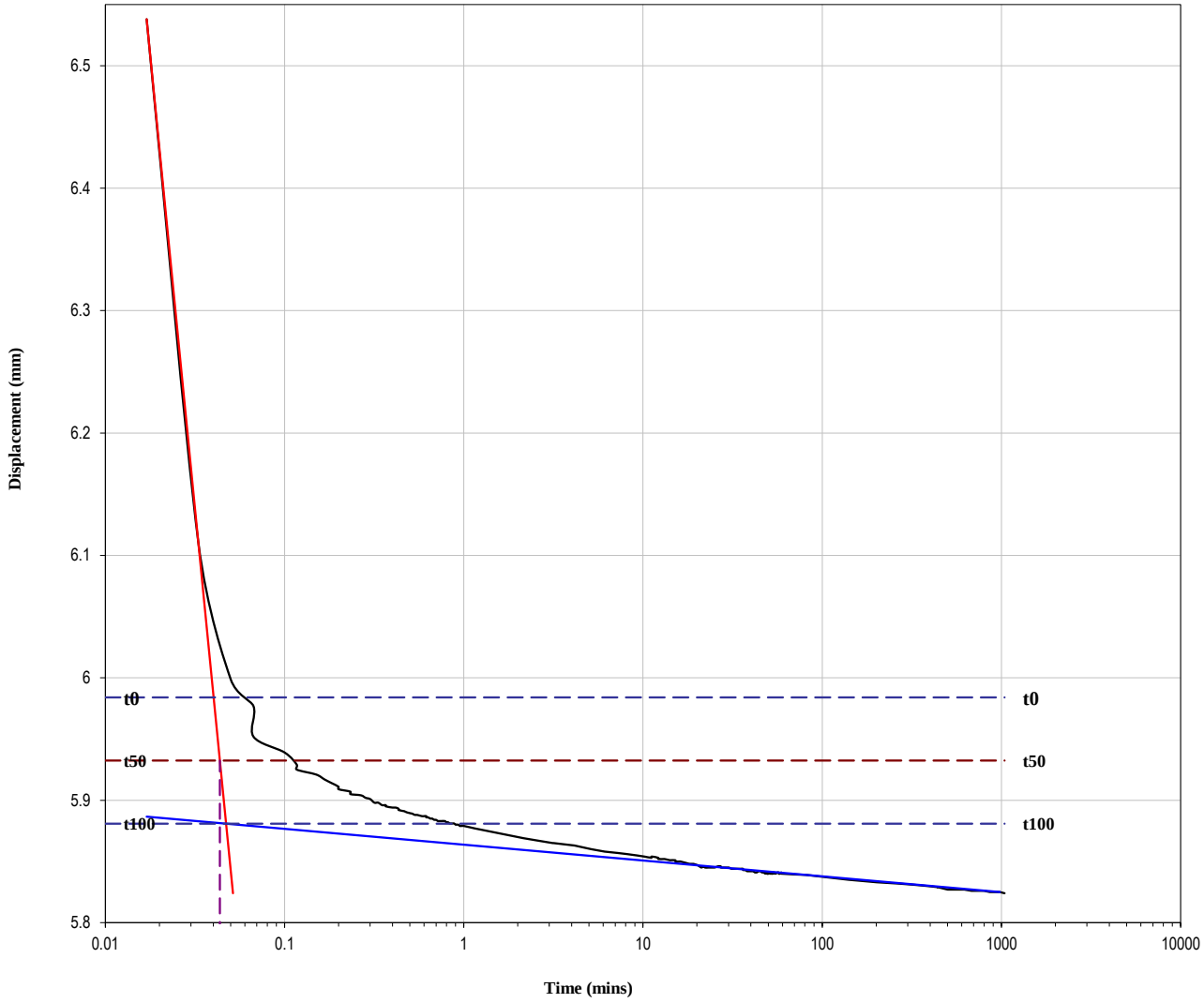
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS

Stage 1 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.04	mins
t_{100}	0.05	mins
Time to Failure =	296.62	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0168565	mm/min

Notes/Remarks:

Graph not to scale

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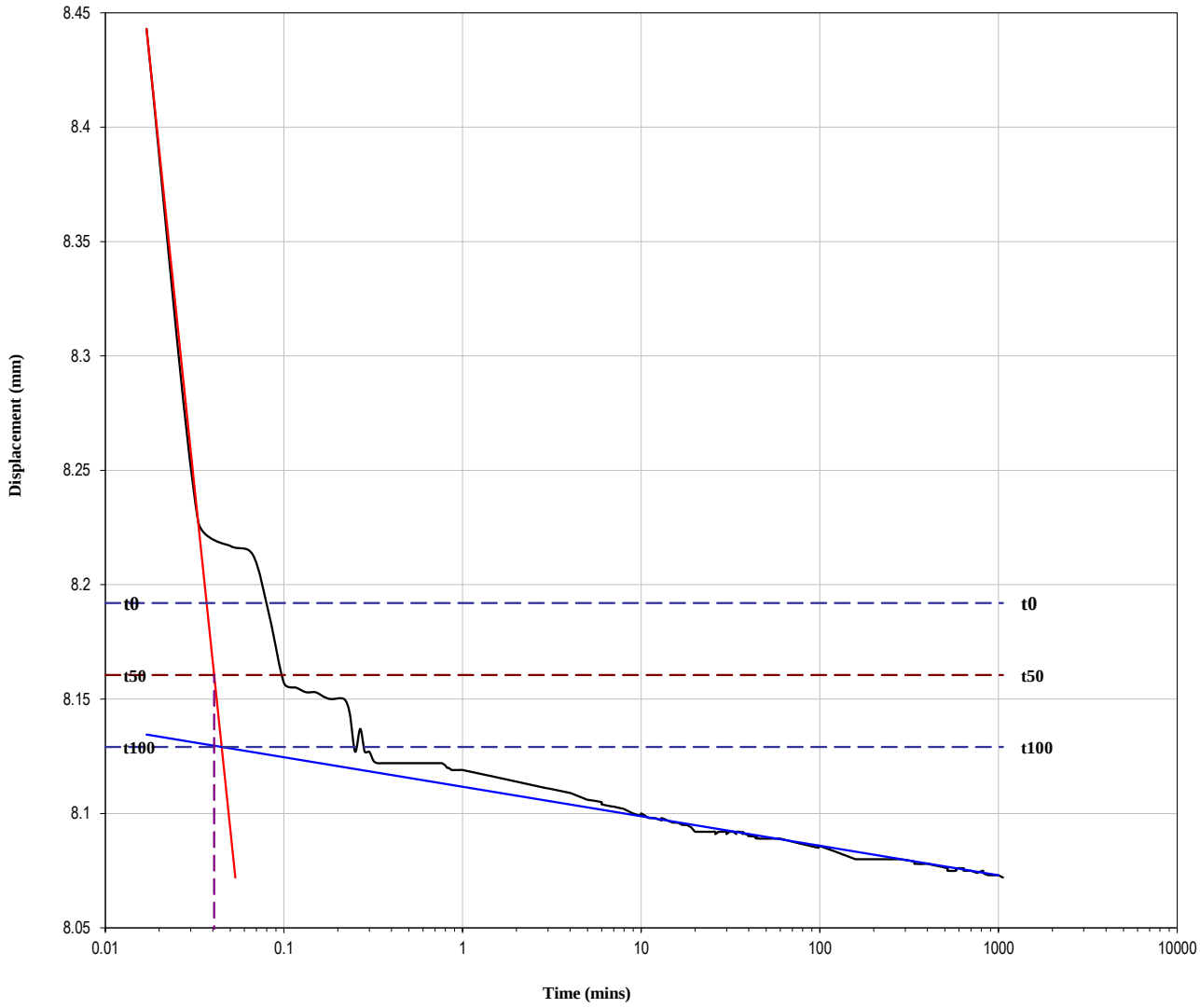
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS

Stage 2 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.04	mins
t_{100}	0.04	mins
Time to Failure =	408.03	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0122541	mm/min

Notes/Remarks:

Graph not to scale

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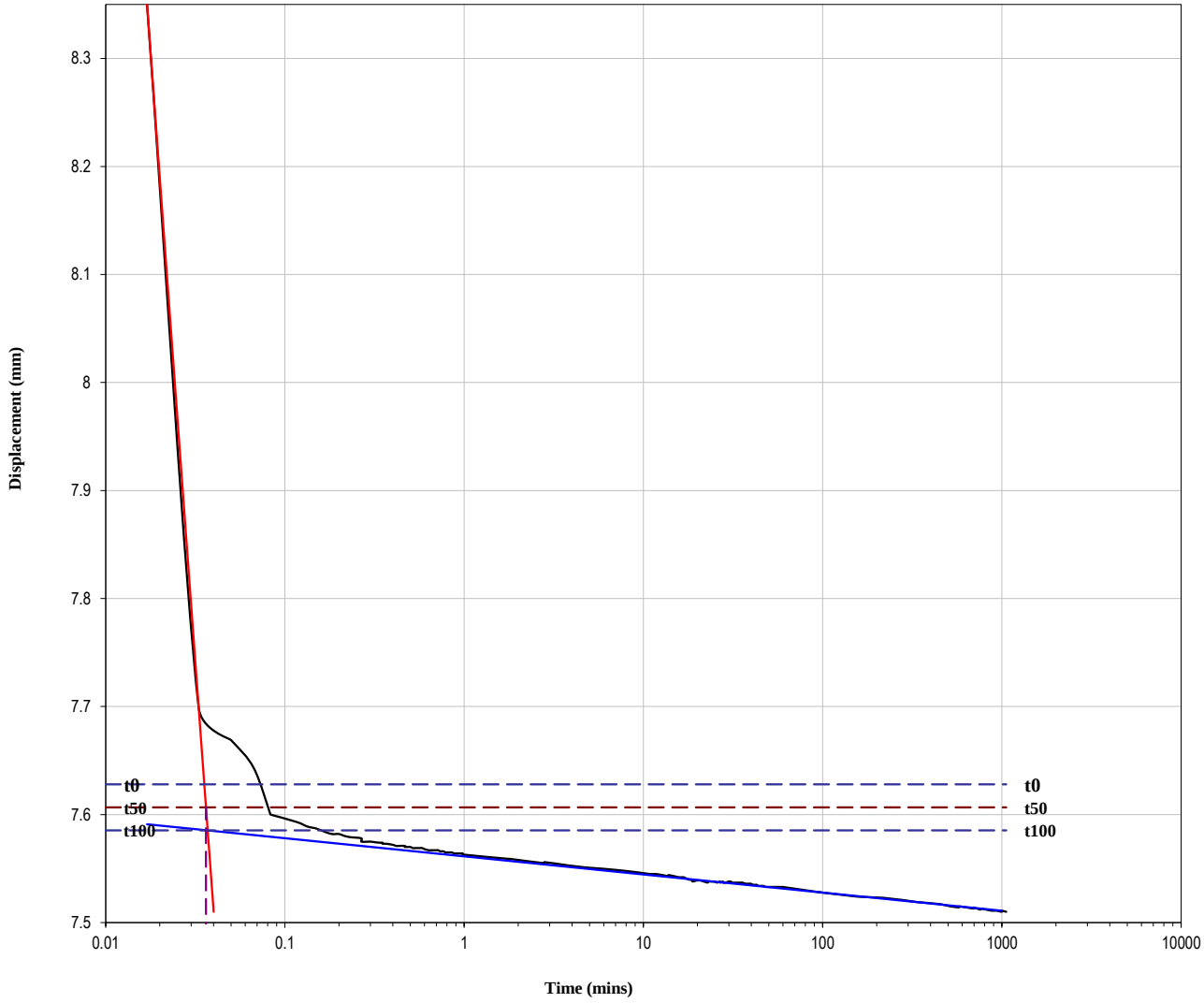
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030653- DS

Stage 3 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.04	mins
t_{100}	0.04	mins
Time to Failure =	380.33	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0131463	mm/min

Notes/Remarks:

Graph not to scale

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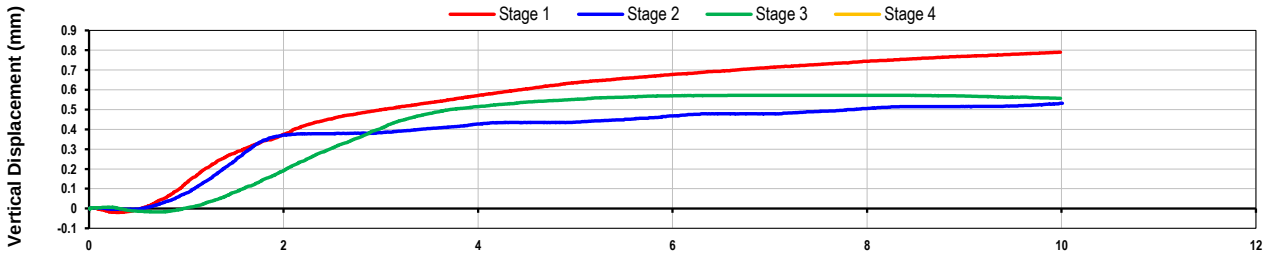
DIRECT SHEAR TEST REPORT

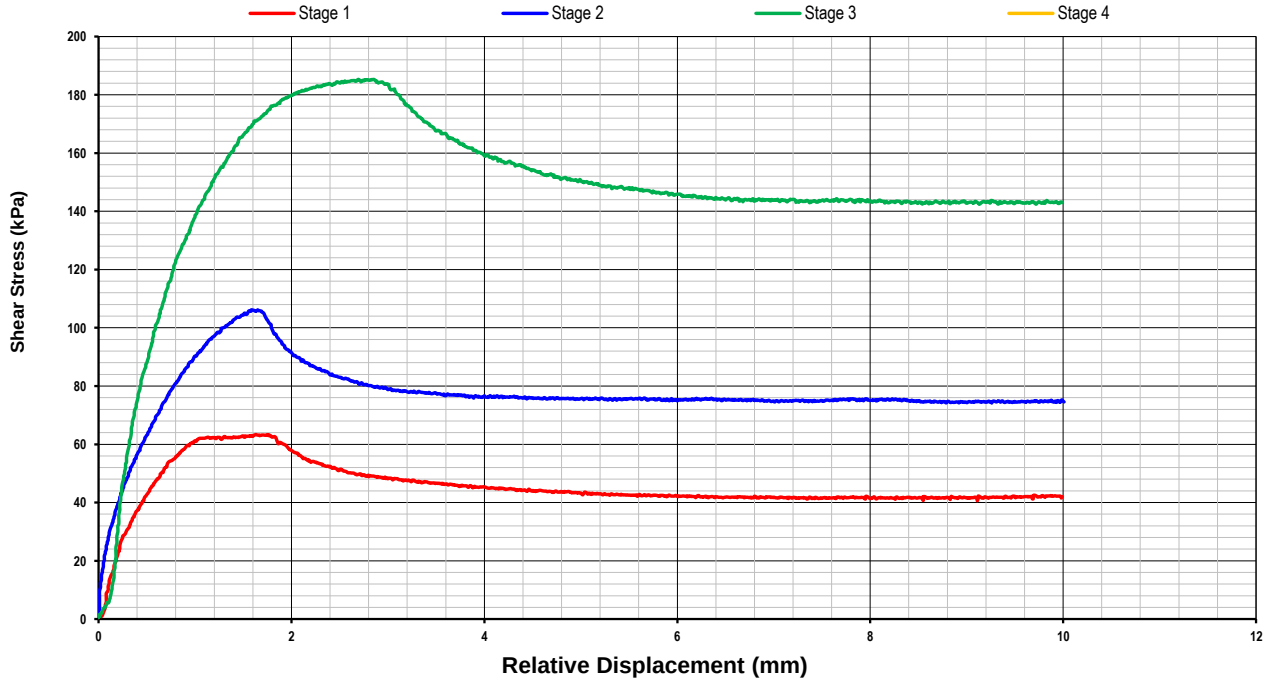
Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS
		Workorder No	0009647
Address	13 Brock Street Thomastown VIC 3074	**Test Date**	8/04/2022
		Report Date	11/04/2022
Project	GS6209/1 (WR 7136) - Project Marinus - IS360318		
Client ID	#20 - HB-TP07-C	**Depth (m)**	1.80-2.00
Description	SILTY CLAYEY SAND- dark brown		
Sample Type	Three individual soil specimens - Remoulded to 98% of MDD @ 100% of OMC as requested by client.		

Vertical Displacement/Relative Displacement Plot



Shear Stress/Displacement Plot



Notes/Remarks: Tested As Requested

Note: Area correction based on square sample equation.

Graph not to scale

Sample/s supplied by the client

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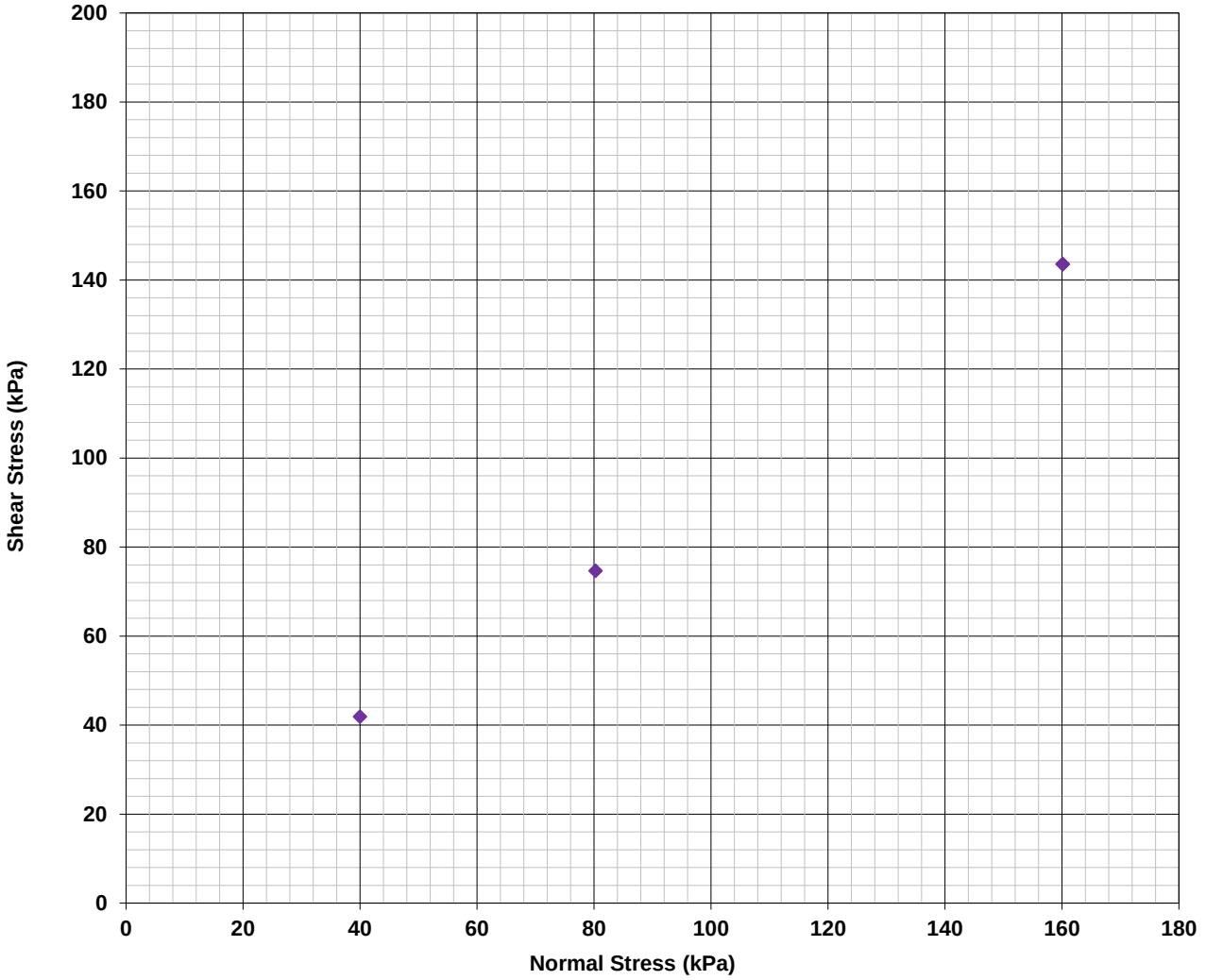
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS

Failure Criteria **Residual @ 9 , 9 , 9 , mm Displacement**

Residual - Normal Stress vs Shear Stress



Shear Angle (°)	40.3	Cohesion (kPa)	7.3	R^2	1.000
Specimen Condition	Inundated	Normal Stress (kPa)		Corrected Shear Stress (kPa)	
Specimen Dimensions (mm)	100.0	Stage 1	40.0		41.9
Initial Height (mm)	42.0	Stage 2	80.2		74.6
Rate of Strain (mm/min)	0.008	Stage 3	160.1		143.6
Initial Moisture Content (%)	23.0				
Initial Wet Density(t/m^3)	1.98				
Initial Dry Density(t/m^3)	1.61				

Graph not to scale

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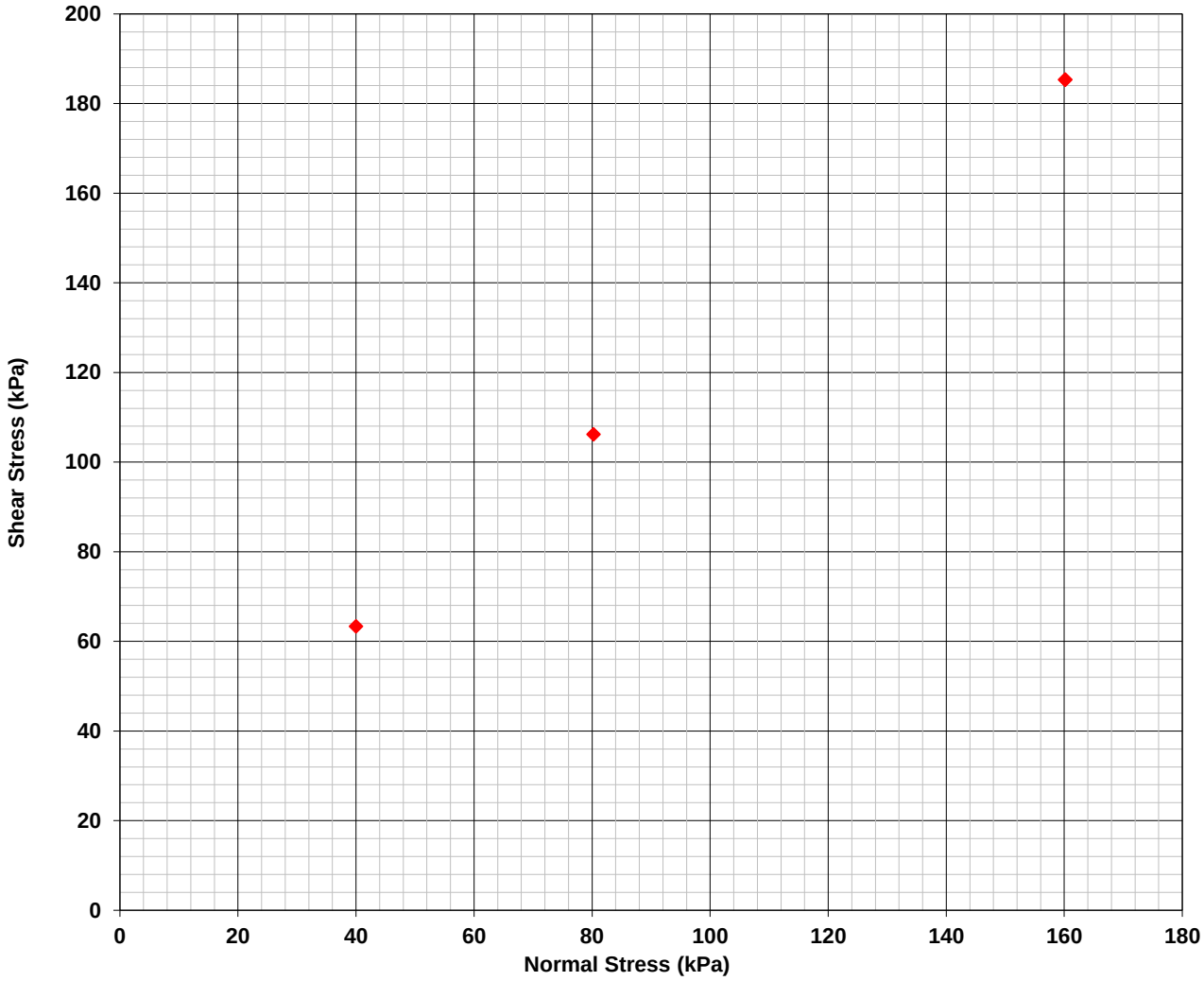
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS

Failure Criteria **Peak**

Peak - Normal Stress vs Shear Stress



Shear Angle (°) 45.3		**Cohesion (kPa)** 23.7		**R^2** 1.000
Specimen Condition	Inundated	Normal Stress (kPa)		Corrected Shear Stress (kPa)
Specimen Dimensions (mm)	100.0	Stage 1	40.0	63.3
Initial Height (mm)	42.0	Stage 2	80.2	106.2
Rate of Strain (mm/min)	0.008	Stage 3	160.1	185.3
Initial Moisture Content (%)	23.0			
Initial Wet Density(t/m^3)	1.98			
Initial Dry Density(t/m3)	1.61			

Graph not to scale

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DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS

CLIENT:	Ground Sciences Pty Ltd	
PROJECT:	GS6209/1 (WR 7136) - Project Marinus - IS360318	AFTER TEST
LAB SAMPLE No.	22030654	DATE: 10/04/22
BOREHOLE:	#20 - HB-TP07-C	DEPTH: 1.80-2.00

Notes/Remarks:

Photo not to scale

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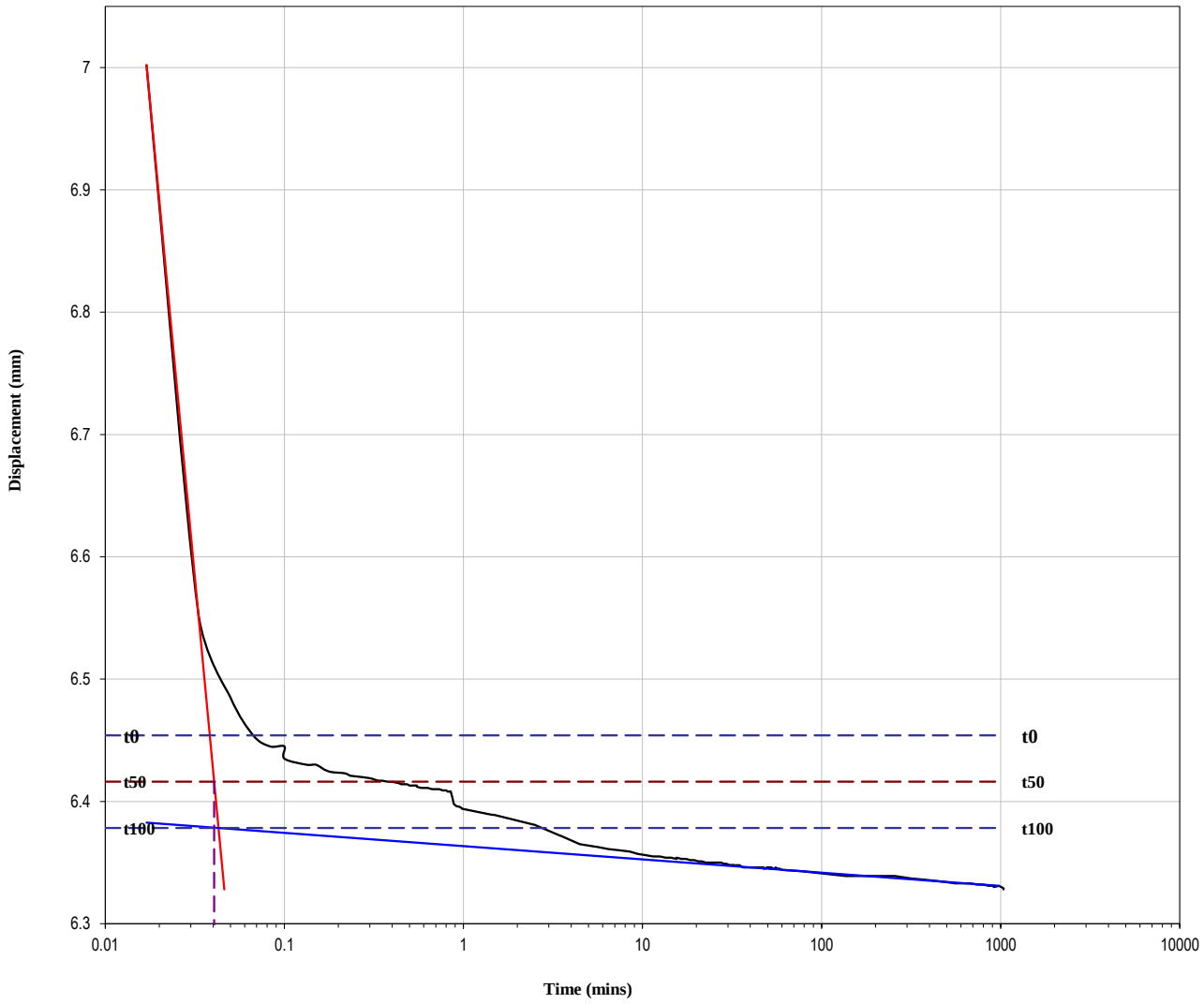
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS

Stage 1 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.04	mins
t_{100}	0.04	mins
Time to Failure =	320.81	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0155857	mm/min

Notes/Remarks:

Graph not to scale

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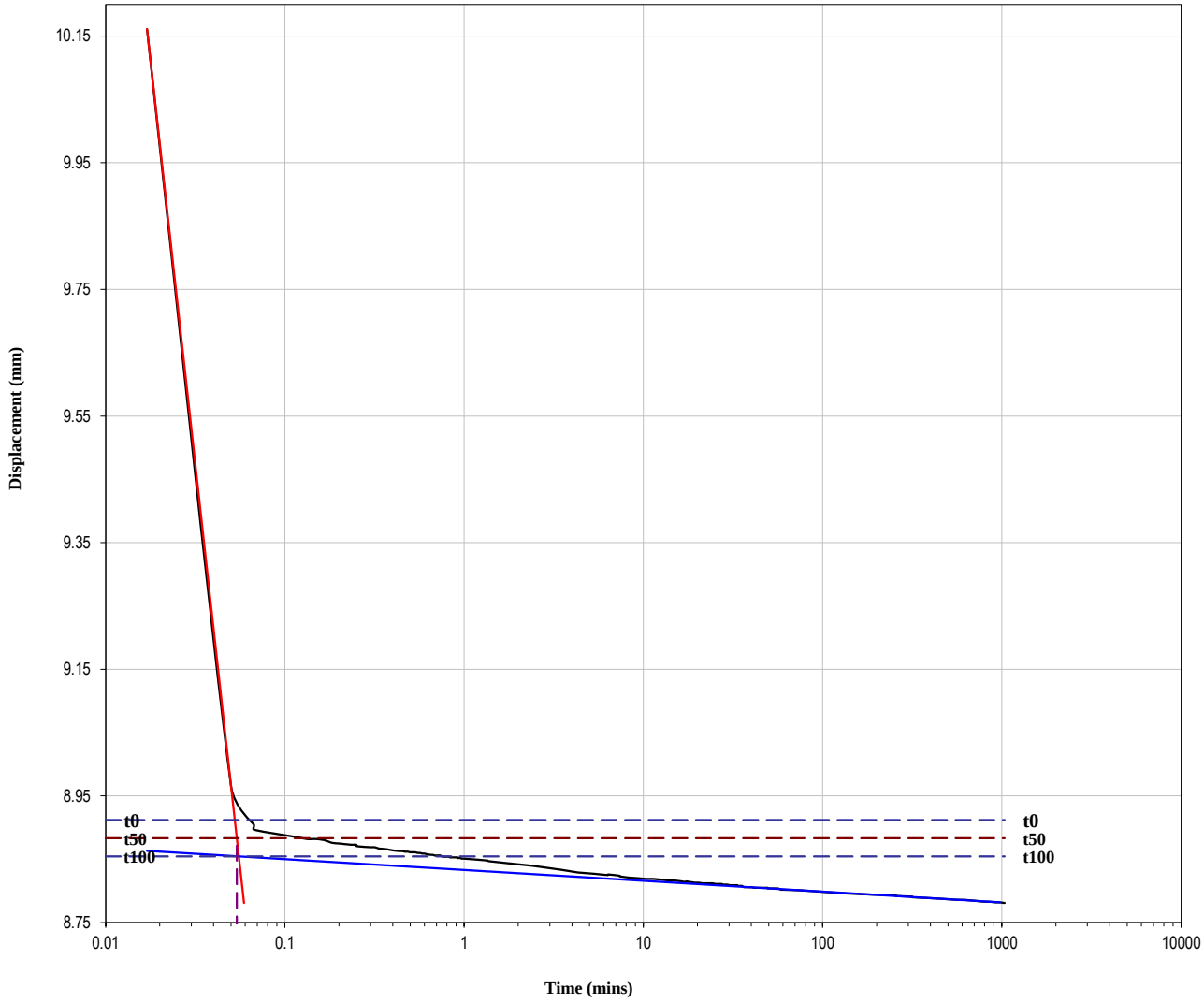
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS

Stage 2 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.05	mins
t_{100}	0.06	mins
Time to Failure =	444.16	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.0112571	mm/min

Notes/Remarks:

Graph not to scale

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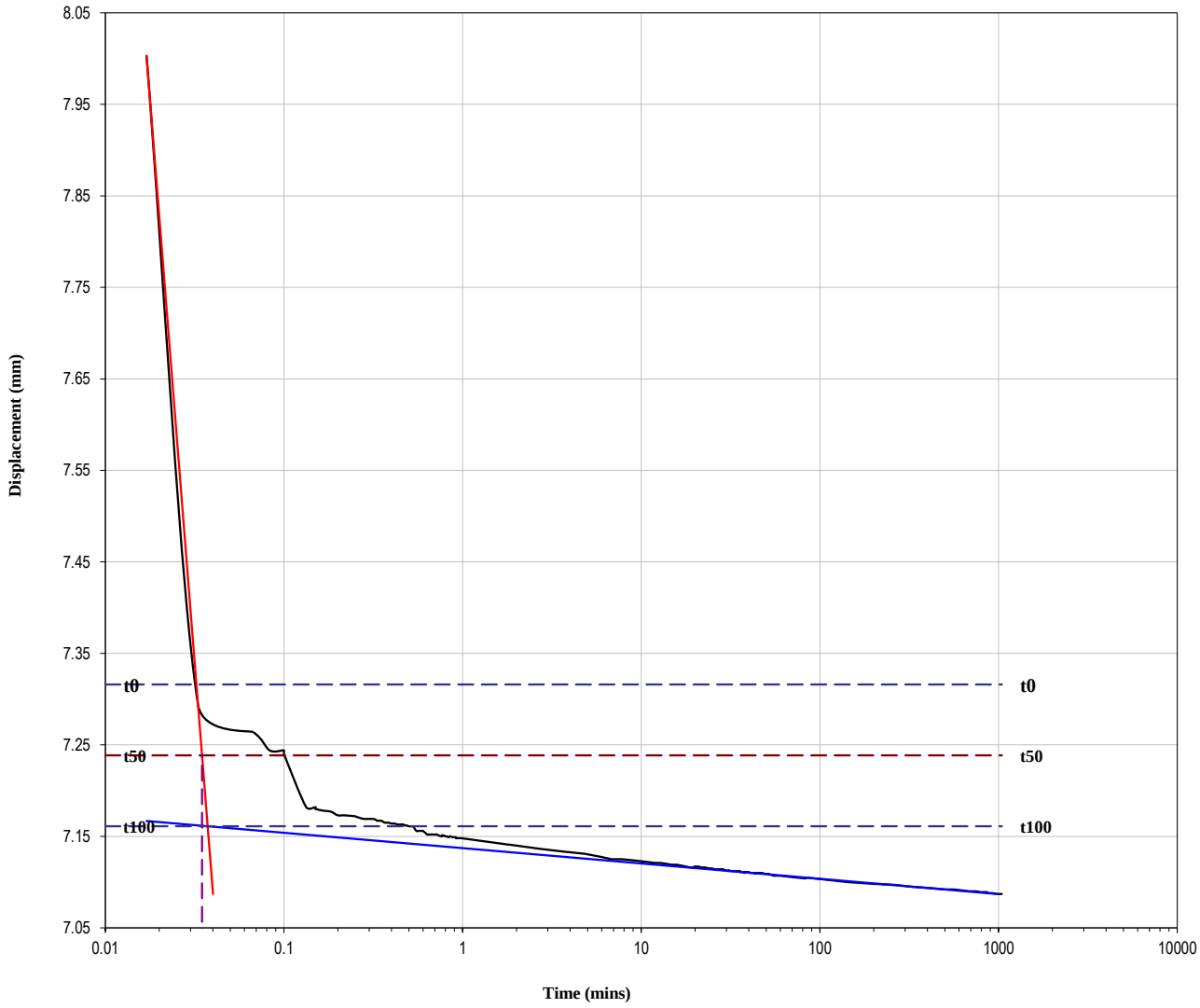
DIRECT SHEAR TEST REPORT

Test Method: AS 1289.6.2.2

Client	Ground Sciences Pty Ltd	**Report No.**	22030654- DS

Stage 3 Consolidation

Displacement v's Time (Log Scale)



t_{50}	0.03	mins
t_{100}	0.04	mins
Time to Failure =	361.93	mins
Estimated Displacement to Failure =	5	mm
Displacement Rate =	0.013815	mm/min

Notes/Remarks:

Graph not to scale

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ACCURATE QUALITY RESULTS FOR TOMORROW'S ENGINEERING

Ground Science
13 Brock St
Thomastown
VIC 3074

NATA Accredited
Accreditation Number 1261
Site Number 1254

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Attention: [redacted]

Report **868774-S**
Project name HEYBRIDGE SITE INVESTIGATION (HEYBRIDGE)
Project ID GS6209
Received Date Mar 04, 2022

Client Sample ID			**S31 - HBLF-BH01-C_1.0-1.28m**
Sample Matrix			**Soil**
Eurofins Sample No.			**M22-Ma10938**
Date Sampled			**Mar 01, 2022**
Test/Reference	LOR	Unit	
Chloride	5	mg/kg	5.2
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	31
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	5.3
Resistivity*	0.5	ohm.m	320
Sulphate (as SO4)	30	mg/kg	< 30
% Moisture	1	%	4.4

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Chloride	Melbourne	Mar 08, 2022	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Mar 08, 2022	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Mar 08, 2022	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Sulphate (as SO4)	Melbourne	Mar 08, 2022	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
% Moisture	Melbourne	Mar 05, 2022	14 Days
- Method: LTM-GEN-7080 Moisture			

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email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: Ground Science
Address: 13 Brock St
Thomastown
VIC 3074

Order No.: SPORT482
Report #: 868774
Phone: 9464 4617
Fax: 9464 4618

Received: Mar 4, 2022 3:40 PM
Due: Mar 11, 2022
Priority: 5 Day
Contact Name: Tim Senserrick

Project Name: HEYBRIDGE SITE INVESTIGATION (HEYBRIDGE)
Project ID: GS6209

Eurofins Analytical Services Manager : [redacted]

Sample Detail						Aggressivity Soil Set	Moisture Set
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
Sydney Laboratory - NATA # 1261 Site # 18217							
Brisbane Laboratory - NATA # 1261 Site # 20794							
Mayfield Laboratory - NATA # 1261 Site # 25079							
Perth Laboratory - NATA # 2377 Site # 2370							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	S31 - HBLF-BH01-C_1.0-1.28m	Mar 01, 2022		Soil	M22-Ma10938	X	X
Test Counts						1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Chloride	mg/kg	< 5			5	Pass	
Sulphate (as SO4)	mg/kg	< 30			30	Pass	
LCS - % Recovery							
Chloride	%	106			70-130	Pass	
Sulphate (as SO4)	%	106			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
Chloride	M22-Ma10961	NCP	mg/kg	8.6	7.1	19	30%	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	M22-Ma11710	NCP	uS/cm	75	75	<1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma11710	NCP	pH Units	7.4	7.4	pass	30%	Pass	
Resistivity*	M22-Ma11710	NCP	ohm.m	130	130	<1	30%	Pass	
Sulphate (as SO4)	M22-Ma10961	NCP	mg/kg	< 30	< 30	<1	30%	Pass	
% Moisture	M22-Ma10686	NCP	%	3.3	2.9	11	30%	Pass	

Comments

Eurofins | Environment Testing accreditation number 1261, site 18217 is currently in progress of a controlled transition to a new custom built location at 179 Magowar Road, Girraween, NSW 2145. All results on this report denoted as being performed by Eurofins | Environment Testing Unit F3, Building F, 16 Mars road, Lane Cove West, NSW 2066, corporate site 18217, will have been performed on either Lane Cove or new Girraween site

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised by:

[redacted]
Scott Beddoes

A[redacted]
Senior Analyst-Inorganic (VIC)

[redacted]
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

SMS Geotechnical Pty. Ltd.
Unit 9/21 Beafield Road
Para Hills West, South Australia 5096
Ph. (08) 8258 7498
www.smsgeotechnical.com.au

Report No.: TH:1-2206881
Issue No.: 1

Thermal Resistivity Report ASTM D5334

Client:	Ground Science Pty Ltd 13 Brock Street, Thomastown VIC 3074
Project No:	SMS1.21639
Project:	Geotechnical Testing
Location:	Project Marinus - Heybridge Site Inves. GS6209/1

NATA Accredited Laboratory Number: 19225

Accredited for compliance with ISO/IEC 17025-Testing

The results in this report relate only to the items/samples that were tested.

Approved Signatory: [redacted]
(Laboratory Coordinator)
Date of Issue: 29/03/2022

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

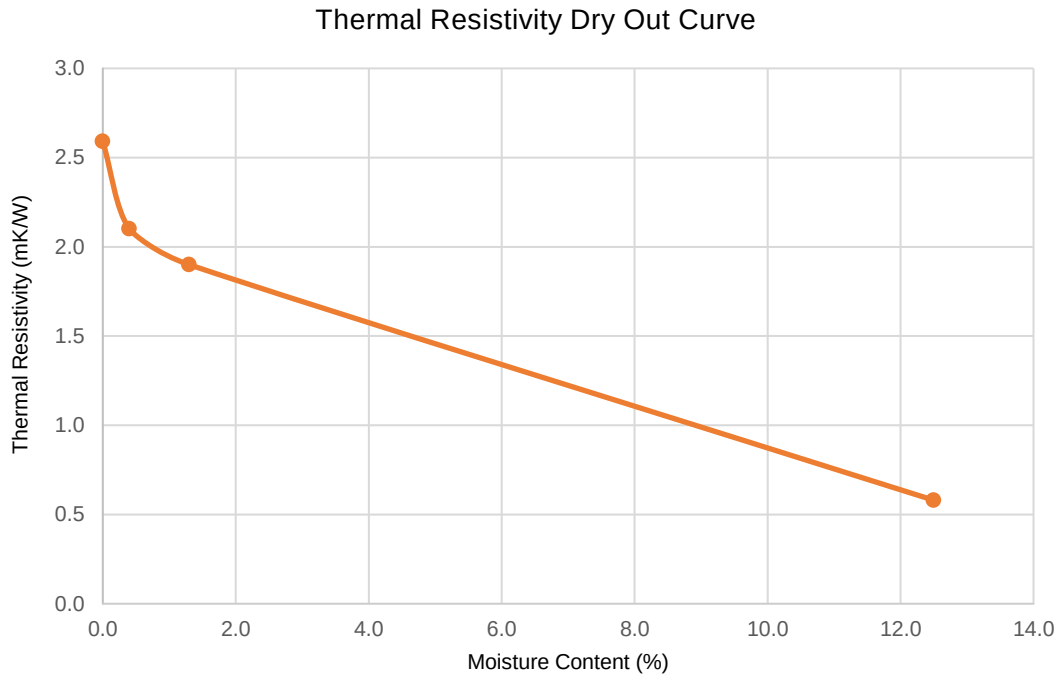
Sample Details

Sample ID:	1-2206881	**Material:**	Sandy CLAY
Location:	62091-S13 HB-TP03-C	**Material Description:**	pale brown
Depth:	2.00m - 2.50m	**Sampling Method:**	Submitted by client
Date Sampled:		**Date Moulded:**	21/03/2022

Test Results

Compaction Method (AS1289):	5.1.1
Maximum Dry Density (t/m^3):	1.88
Optimum Moisture Content (%):	12.5

Moisture Content (%)	Compacted Dry Density (t/m^3)	Thermal Conductivity (W/mK)	Thermal Resistivity (mK/W)
0.0	1.84	0.39	2.59
0.4	1.84	0.45	2.10
1.3	1.84	0.53	1.90
12.5	1.84	1.71	0.58



Resistivity Meter: TLS-100 **Needle ID:** 810 **Needle Insertion:** Pre-drilled

Remarks

MDD and OMC supplied by client

Appendix D2. Rock Laboratory Test Results

BRTS
Bamford Rock Testing Services

239 Arden Street, North Melbourne, Vic 3051 Australia
Telephone: (03) 9329 2818 email : tests@bamfordrocks.com.au ABN: 78 167 341 693

NATA Accredited Facility No. 19523 Accredited for compliance with ISO/IEC 17025 - Testing

REPORT 1675
ON
ROCK TESTING

(BRTS JOB NUMBER 1675)

Client: Jacobs

Project: Heybridge Converter Station – Heybridge, TAS

Reference: IS360318-001

23rd March 2022

BRTS
Bamford Rock Testing Services

239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1675
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Converter Station
Location: Heybridge, TAS
Reference: IS360318-001

AS 4133.1.1.1: Rock moisture content tests

As Received - Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	**Moisture content (%)**
B22-0631	HCS	Quartzwacke	HB-BH01-C	5.18	5.28	**2.0**
B22-0632	HCS	Quartzwacke	HB-BH01-C	8.50	8.65	**4.0**
B22-0634	HCS	Quartzwacke	HB-BH02-C	4.60	4.77	**1.5**
B22-0637	HCS	Quartzwacke	HB-BH03-C	5.70	5.82	**1.0**
B22-0638	HCS	Quartzwacke	HB-BH03-C	9.37	9.47	**1.2**
B22-0639	HCS	Quartzwacke	HB-BH04-C	4.29	4.39	**1.7**
B22-0642	HCS	Quartzwacke	HB-BH05-C	8.24	8.41	**2.0**
B22-0644	HCS	Quartzwacke	HB-BH06-C	10.24	10.41	**0.9**
B22-0645	HCS	Quartzwacke	HB-BH06-C	11.15	11.32	**0.4**

Date Tested: 15/03/2022

X
Dr W.E. Bamford
Director

X
Dr Darshika Palamakumbure
Lab Manager

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.1

Report no	**C007-0631**
Sample no	**B22-0631**
Client No.	**C007**
Date	20/03/2022
Date Tested	17/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HCS
Borehole	HB-BH01-C	**Depth (m)**	5.18 - 5.28

SAMPLE DETAILS / TESTING DETAILS

Diameter	60.8	mm	**Rate of Deformation**	0.09	mm/min	**Dry Density**	2.533	**t/m^3**
Length	97.0	mm	**Stress Rate**	51	kPa/s	**Wet Density**	2.583	**t/m^3**
L/D Ratio	1.6	*	**Test Duration**	21 Min 39 Sec		**Axial Load @ Failure**	191.1	**kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Multiple axial cleavages, + shear through rock substance @ 34° to axis.

TEST RESULTS

UCS	**65.8**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**2.0**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

Note: L/D Ratio as tested is less than the "standard" ratio of 2.0

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X Dr W.E. Bamford
Director

X Dr D. Palamakumbure
Lab Manager

NATA ACCREDITED FOR TECHNICAL COMPETENCE

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0632**
Sample no	**B22-0632**
Client No.	**C007**
Date	20/03/2022
Date Tested	17/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HCS
Borehole	HB-BH01-C	**Depth (m)**	8.50 - 8.65

SAMPLE DETAILS / TESTING DETAILS

Diameter	60.8	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.447 t/m^3
Length	144.5	mm	**Stress Rate**	10	kPa/s	**Wet Density**	2.545 t/m^3
L/D Ratio	2.4		**Test Duration**	11 Min 37 Sec		**Axial Load @ Failure**	19.9 kN

Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on limonite coated joint @ 27° to axis.

TEST RESULTS

UCS	**6.9**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**4.0**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0634**
Sample no	**B22-0634**
Client No.	**C007**
Date	20/03/2022
Date Tested	17/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HCS
Borehole	HB-BH02-C	**Depth (m)**	4.60 - 4.77

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.8	mm	**Rate of Deformation**	0.07	mm/min		**Dry Density**	2.466	**t/m^3**
Length	167.8	mm	**Stress Rate**	8	kPa/s		**Wet Density**	2.504	**t/m^3**
L/D Ratio	2.8		**Test Duration**	9 Min 32 Sec			**Axial Load @ Failure**	13.5	**kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on bedding @ 46° to axis.

TEST RESULTS

UCS	**4.6**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**1.5**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0637**
Sample no	**B22-0637**
Client No.	**C007**
Date	20/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology Quartzwacke **Sample Location** HCS
Borehole HB-BH03-C **Depth (m)** 5.70 - 5.80

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.9	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.568	**t/m^3**
Length	92.8	mm	**Stress Rate**	36	kPa/s	**Wet Density**	2.592	**t/m^3**
L/D Ratio	1.5	*	**Test Duration**	22 Min 22 Sec		**Axial Load @ Failure**	139.1	**kN**

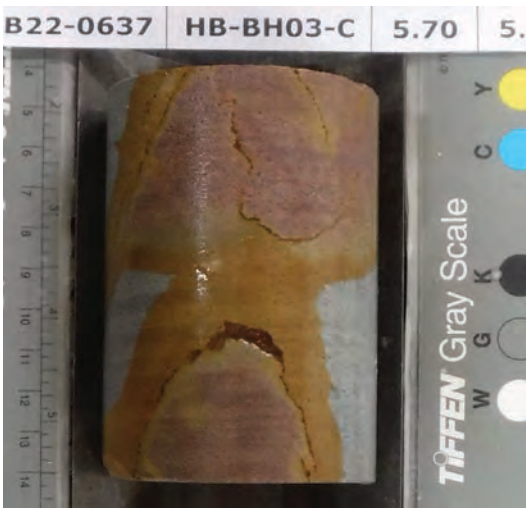
Testing Machine ECT-300EDC 300KN

TEST RESULTS

UCS	**48**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**1.0**	**%**

Failure Mode
Shear through rock substance @ 27° to axis, + shears on limonite stained joints @ 40° and 37° to axis.

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.



Before Test

After Test

Note: L/D Ratio as tested is less than the "standard" ratio of 2.0

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0638**
Sample no	**B22-0638**
Client No.	**C007**
Date	20/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology Quartzwacke **Sample Location** HCS
Borehole HB-BH03-C **Depth (m)** 9.37 - 9.54

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.8	mm	**Rate of Deformation**	0.07	mm/min		**Dry Density**	2.571	**t/m^3**
Length	164.6	mm	**Stress Rate**	14	kPa/s		**Wet Density**	2.602	**t/m^3**
L/D Ratio	2.7		**Test Duration**	7 Min 39 Sec			**Axial Load @ Failure**	19.3	**kN**

Testing Machine ECT-300EDC 300KN

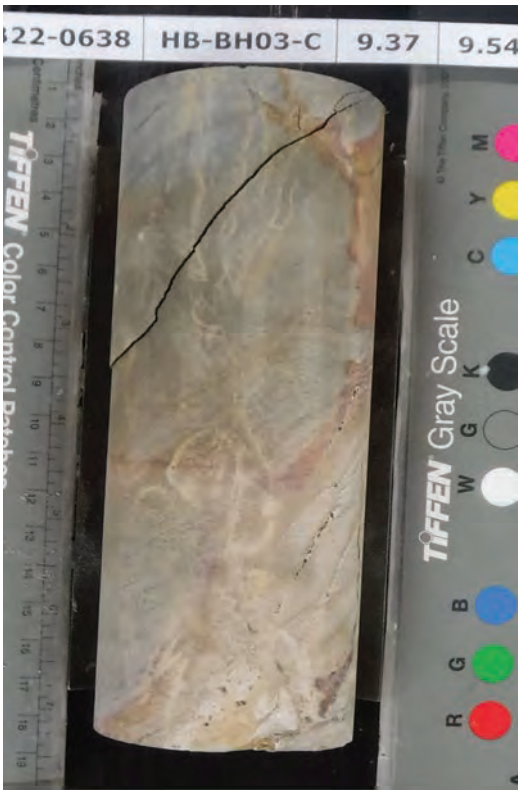
Failure Mode
Shear on bedding @ 45° to axis.

TEST RESULTS

UCS	**6.6**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**1.2**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test



After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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BRTS
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NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0639**
Sample no	**B22-0639**
Client No.	**C007**
Date	20/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HCS
Borehole	HB-BH04-C	**Depth (m)**	4.29 - 4.39

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.7	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.530	**t/m^3**
Length	95.3	mm	**Stress Rate**	8	kPa/s	**Wet Density**	2.573	**t/m^3**
L/D Ratio	1.6	*	**Test Duration**	13 Min 48 Sec		**Axial Load @ Failure**	20.1	**kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on bedding @ 37° to axis, + shear on clean defect @ 12° to axis.

TEST RESULTS

UCS	**6.9**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (ν)	-	
Moisture Content	**1.7**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

Note: L/D Ratio as tested is less than the "standard" ratio of 2.0

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X Dr W.E. Bamford
Director

X Dr D. Palamakumbure
Lab Manager

NATA ACCREDITED FOR TECHNICAL COMPETENCE

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0642**
Sample no	**B22-0642**
Client No.	**C007**
Date	20/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HCS
Borehole	HB-BH05-C	**Depth (m)**	8.24 - 8.41

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.7	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.452	**t/m^3**
Length	167.2	mm	**Stress Rate**	20	kPa/s	**Wet Density**	2.502	**t/m^3**
L/D Ratio	2.8		**Test Duration**	11 Min 39 Sec		**Axial Load @ Failure**	40.7	**kN**

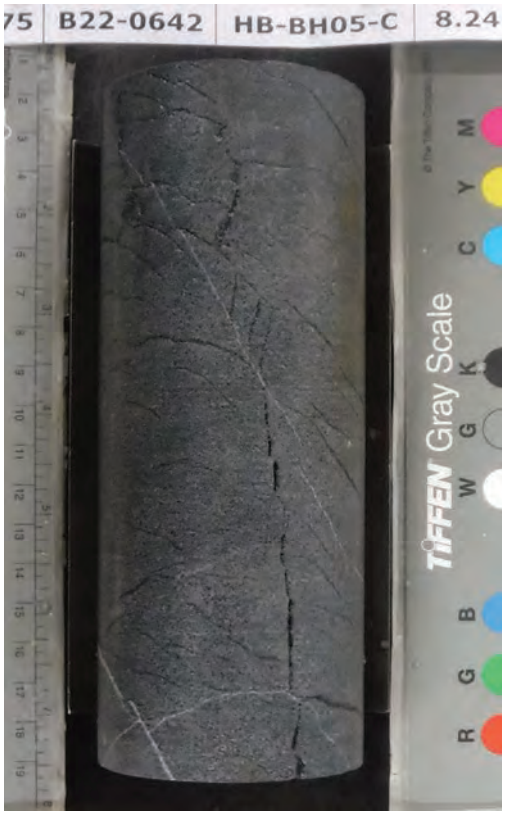
Testing Machine ECT-300EDC 300KN

Failure Mode
Stepped shear parallel to bedding @ 29° to axis.

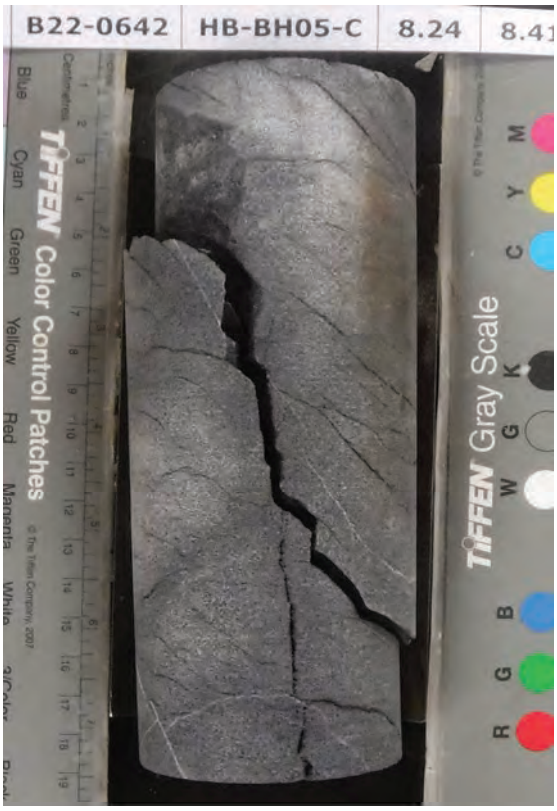
TEST RESULTS

UCS	**14**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**2.0**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.



Before Test



After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

NATA ACCREDITED FOR TECHNICAL COMPETENCE

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0644**
Sample no	**B22-0644**
Client No.	**C007**
Date	20/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HCS
Borehole	HB-BH06-C	**Depth (m)**	8.03 - 8.20

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.8	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.565	**t/m^3**
Length	165.2	mm	**Stress Rate**	18	kPa/s	**Wet Density**	2.589	**t/m^3**
L/D Ratio	2.7		**Test Duration**	14 Min 41 Sec		**Axial Load @ Failure**	44.9	**kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on bedding @ 32° to axis.

TEST RESULTS

UCS	**15**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**0.9**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

NATA ACCREDITED FOR TECHNICAL COMPETENCE

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0645**
Sample no	**B22-0645**
Client No.	**C007**
Date	20/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-001
Project Heybridge Converter Station
Location Heybridge, TAS

Lithology Quartzwacke
Borehole HB-BH06-C
Sample Location HCS
Depth (m) 11.15 - 11.32

SAMPLE DETAILS			TESTING DETAILS				
Diameter	60.7	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.593 t/m^3
Length	151.7	mm	**Stress Rate**	13	kPa/s	**Wet Density**	2.604 t/m^3
L/D Ratio	2.5		**Test Duration**	19 Min 60 Sec		**Axial Load @ Failure**	44.2 kN

Testing Machine ECT-300EDC 300KN

TEST RESULTS

UCS	**15**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**0.4**	**%**

Failure Mode
Shear on bedding @ 47° to axis.

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

NATA ACCREDITED FOR TECHNICAL COMPETENCE

BRTS
Bamford Rock Testing Services
239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1675
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Converter Station
Location: Heybridge, TAS
Reference: IS360318-001

AS 4133.4.1 Rock strength tests - Determination of point load strength index

Sample Storage Comments
After sample preparation, samples were placed in resealable bags and were soaked in water briefly, before testing .

AXIAL POINT LOAD STRENGTH INDEX

BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	Uncorrected Point Load Strength Index (Is) (MPa)	Point Load Strength Index ($I_{s(50)}$) (MPa)	Indentation Hardness Index (IHI) (kN/mm)	*Failure Mode*
B22-0631	HCS	Quartzwacke	HB-BH01-C	5.94	5.99	1.8	**1.9**	1.50	*3*
B22-0632	HCS	Quartzwacke	HB-BH01-C	6.07	6.12	0.32	**0.35**	0.34	*3*
B22-0633	HCS	Quartzwacke	HB-BH01-C	11.14	11.19	0.56	**0.59**	0.55	*1*
B22-0634	HCS	Quartzwacke	HB-BH02-C	6.29	6.34	0.48	**0.52**	0.40	*1*
B22-0635	HCS	Quartzwacke	HB-BH02-C	7.12	7.17	0.14	**0.15**	0.10	*1*
B22-0636	HCS	Quartzwacke	HB-BH03-C	1.12	1.17	0.29	**0.32**	0.26	*3*
B22-0637	HCS	Quartzwacke	HB-BH03-C	6.80	6.85	4.3	**4.6**	2.44	*1*
B22-0638	HCS	Quartzwacke	HB-BH03-C	8.17	8.22	1.7	**1.9**	1.94	*1*
B22-0639	HCS	Quartzwacke	HB-BH04-C	4.78	4.83	0.61	**0.66**	0.63	*2*
B22-0640	HCS	Quartzwacke	HB-BH04-C	8.64	8.69	1.3	**1.4**	1.44	*1,2*
B22-0641	HCS	Quartzwacke	HB-BH05-C	7.40	7.45	0.12	**0.13**	0.19	*3*
B22-0642	HCS	Quartzwacke	HB-BH05-C	10.05	10.10	0.89	**0.96**	3.46	*1,3*
B22-0643	HCS	Quartzwacke	HB-BH06-C	4.90	4.95	1.7	**1.9**	8.40	*1*
B22-0644	HCS	Quartzwacke	HB-BH06-C	6.60	6.65	2.9	**3.2**	3.86	*1,3*
B22-0645	HCS	Quartzwacke	HB-BH06-C	13.07	13.12	3.7	**4.0**	3.65	*1,2*
B22-0646	HCS	Quartzwacke	HB-BH06-C	15.29	15.34	3.4	**3.7**	4.30	*4*

Date tested 18/03/2022

Failure Mode: 1. Fracture through rock substance, not influenced by weak planes 2. Fracture along bedding
3. Fracture influenced by pre-existing plane, microfracture, vein, chemical alteration 4. Chip or partial failure 5. Did not fail

X
Dr W.E. Bamford
Director

X
Dr D. Palamakumbure
Lab Manager

BRTS
Bamford Rock Testing Services
239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1675
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Converter Station
Location: Heybridge, TAS
Reference: IS360318-001

AS 4133.4.1 Rock strength tests - Determination of point load strength index

Sample Storage Comments
After sample preparation, samples were placed in resealable bags and were soaked in water briefly, before testing .

DIAMETRAL POINT LOAD STRENGTH INDEX

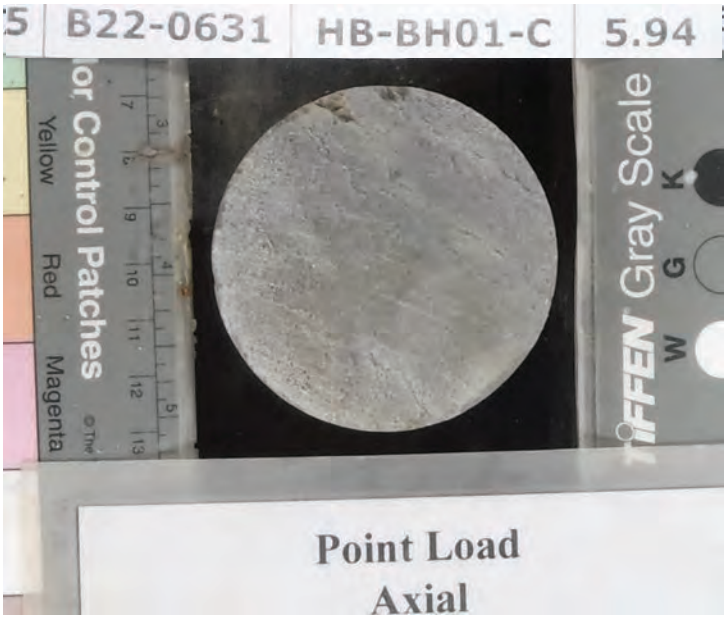
BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	Failure Load (P) (kN)	Point Load Strength Index ($I_{s(50)}$) (MPa)	Indentation Hardness Index (IHI) (kN/mm)	*Failure Mode*
B22-0631	HCS	Quartzwacke	HB-BH01-C	3.77	3.83	4.7	**1.4**	1.38	*4*
B22-0632	HCS	Quartzwacke	HB-BH01-C	7.88	7.94	3.3	**0.97**	0.80	*4*
B22-0634	HCS	Quartzwacke	HB-BH02-C	6.34	6.40	0.94	**0.28**	0.27	*2*
B22-0635	HCS	Quartzwacke	HB-BH02-C	8.39	8.45	3.5	**1.0**	0.45	*4*
B22-0636	HCS	Quartzwacke	HB-BH03-C	2.40	2.46	4.8	**1.4**	1.98	*1,2*
B22-0637	HCS	Quartzwacke	HB-BH03-C	7.54	7.60	4.4	**1.3**	1.90	*2*
B22-0641	HCS	Quartzwacke	HB-BH05-C	5.35	5.41	4.8	**1.4**	1.68	*1,3*
B22-0642	HCS	Quartzwacke	HB-BH05-C	10.10	10.16	3.5	**1.0**	1.11	*1,2*

Date tested 18/03/2022

Failure Mode: 1. Fracture through rock substance, not influenced by weak planes 2. Fracture along bedding
3. Fracture influenced by pre-existing plane, microfracture, vein, chemical alteration 4. Chip or partial failure 5. Did not fail

X
Dr W.E. Bamford
Director

X
Dr D. Palamakumbure
Lab Manager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Point Load
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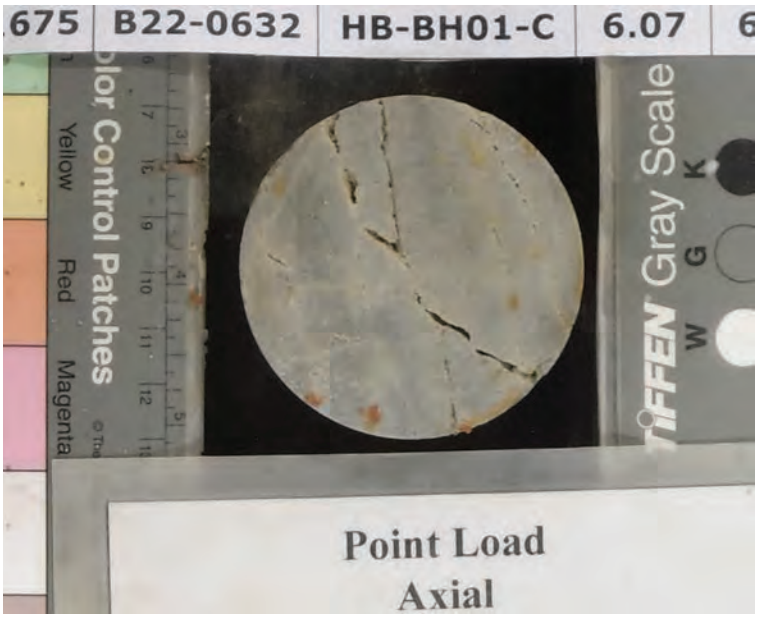
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HB-BH01-C
6.07
Point Load
Axial

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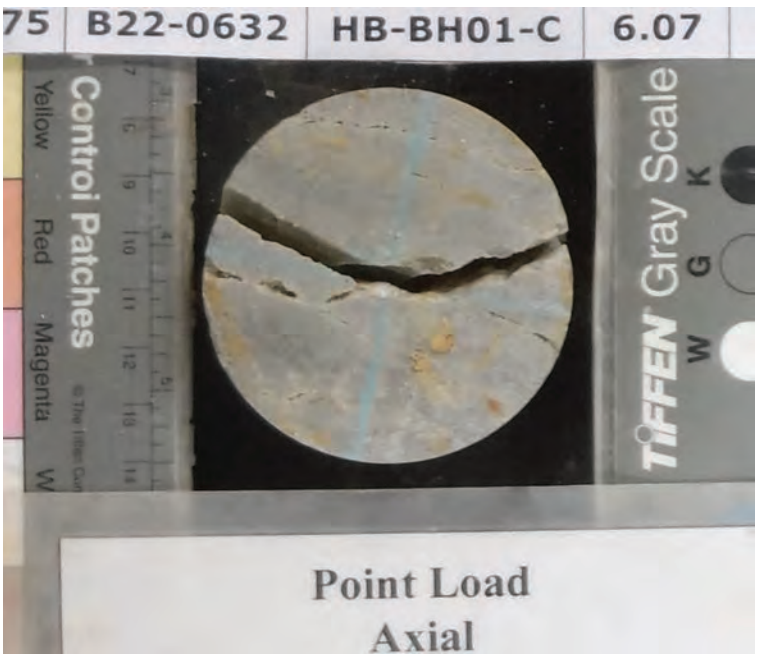
HB-BH01-C
5.94
Point Load
Axial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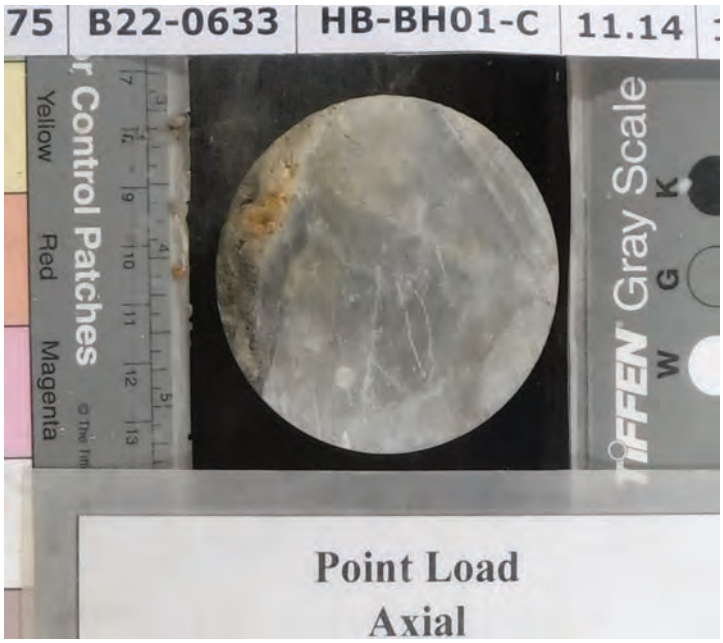
HB-BH01-C
6.07
Point Load
Axial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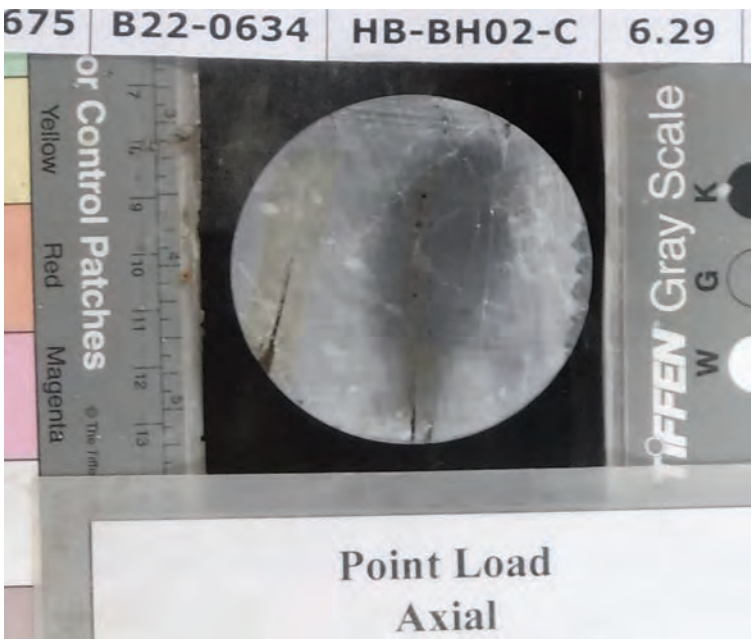
Yellow
Red
Magenta
Gray Scale
Point Load
Axial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Red
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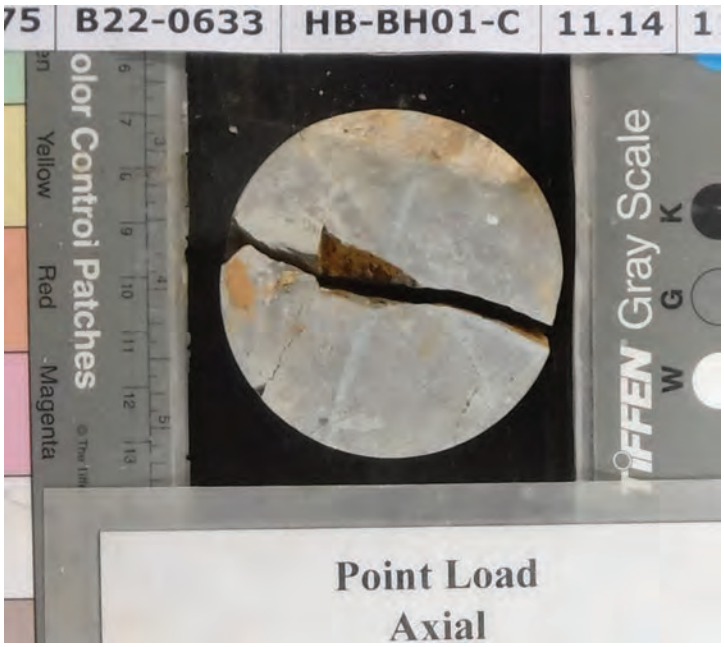
Gray Scale
Point Load
Axial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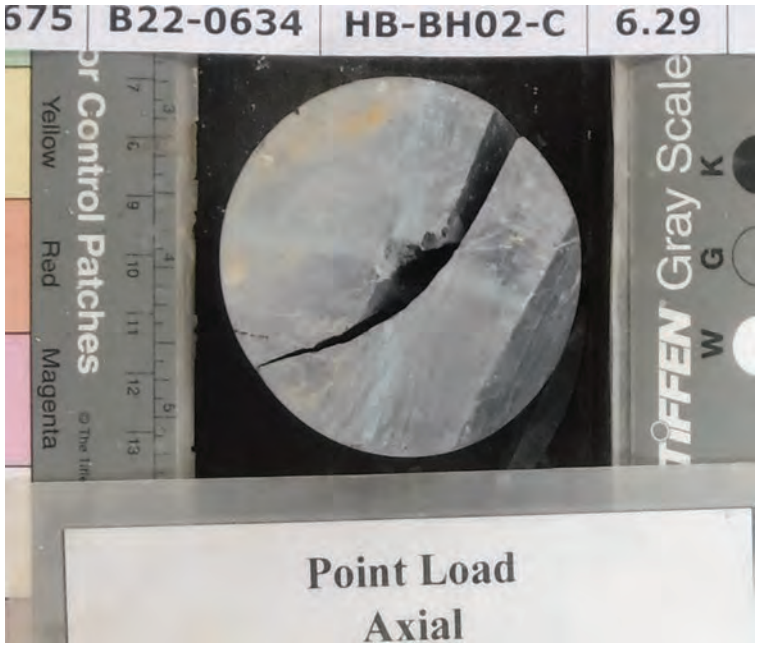
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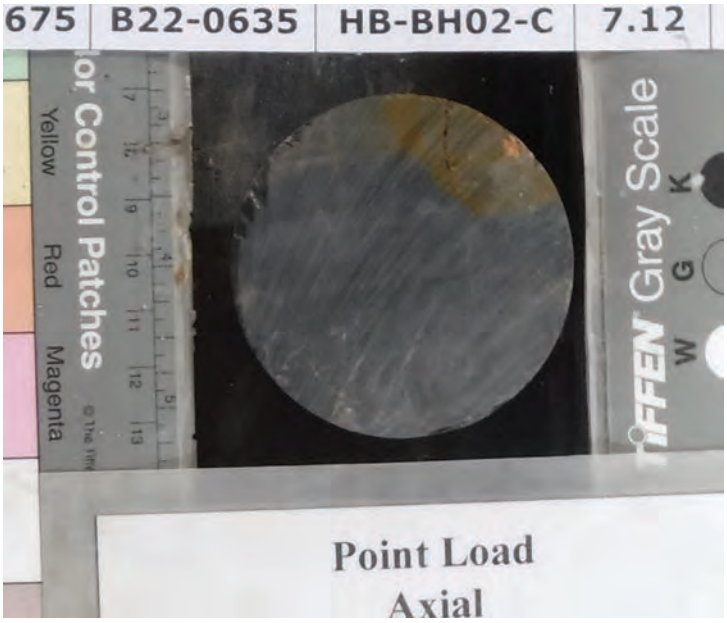
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W G K
Point Load
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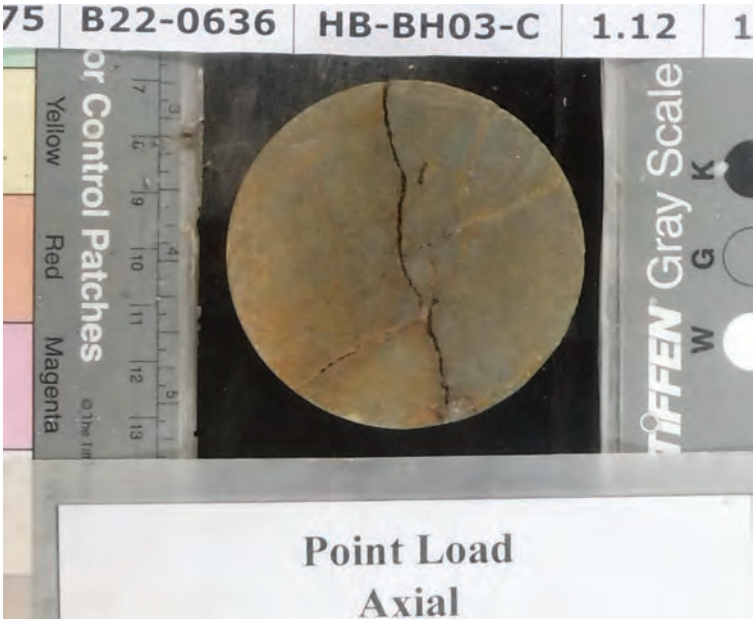
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Magenta
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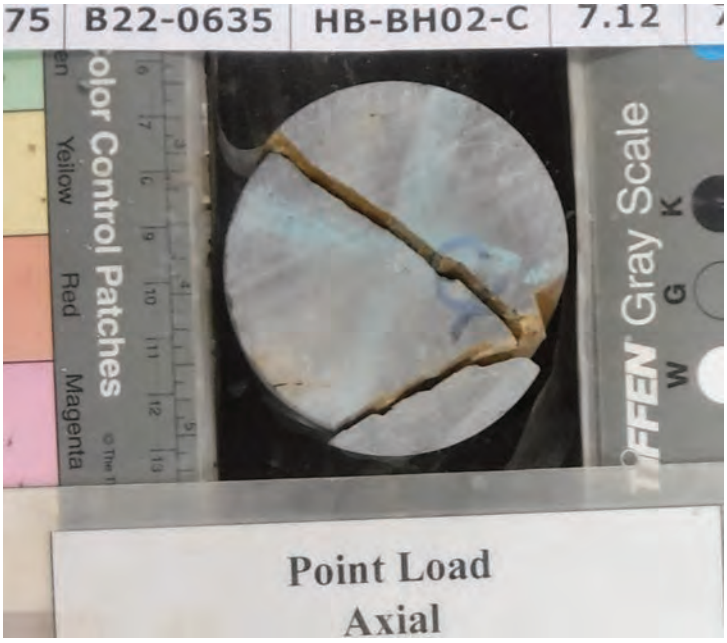
W G K
Point Load
Axial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Point Load
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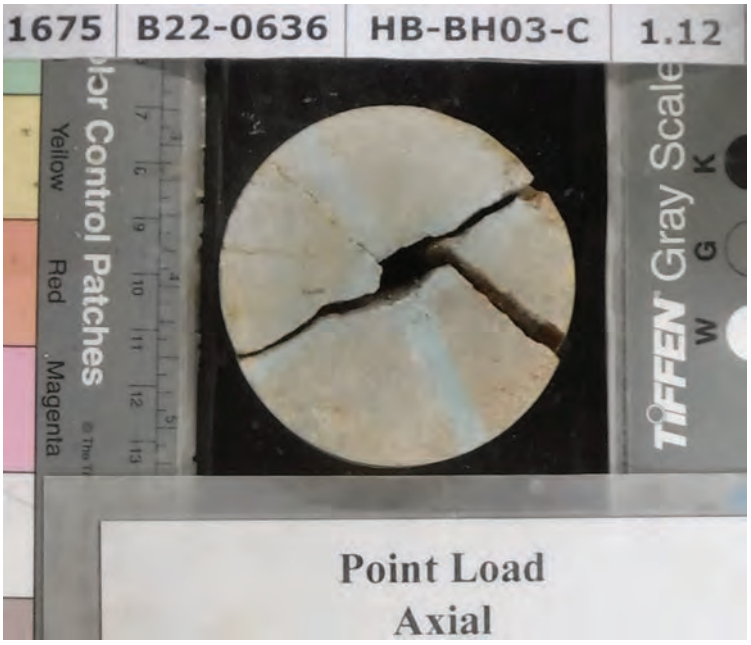
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Point Load
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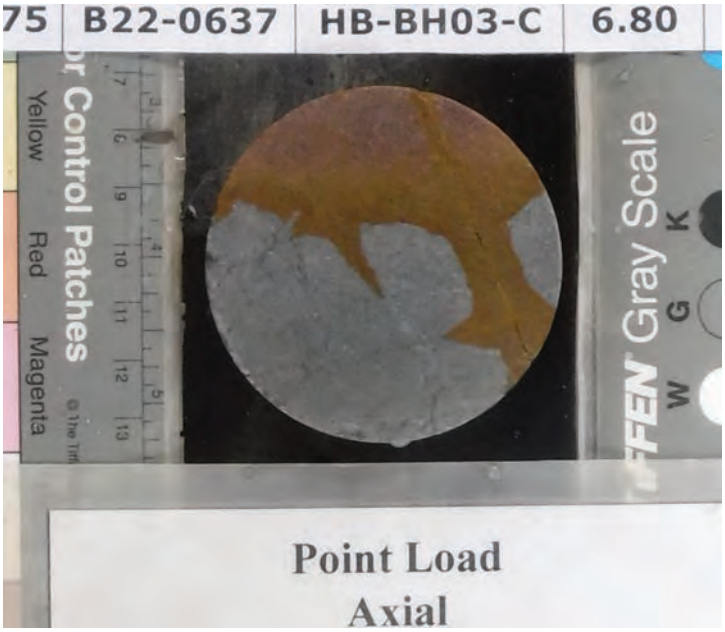
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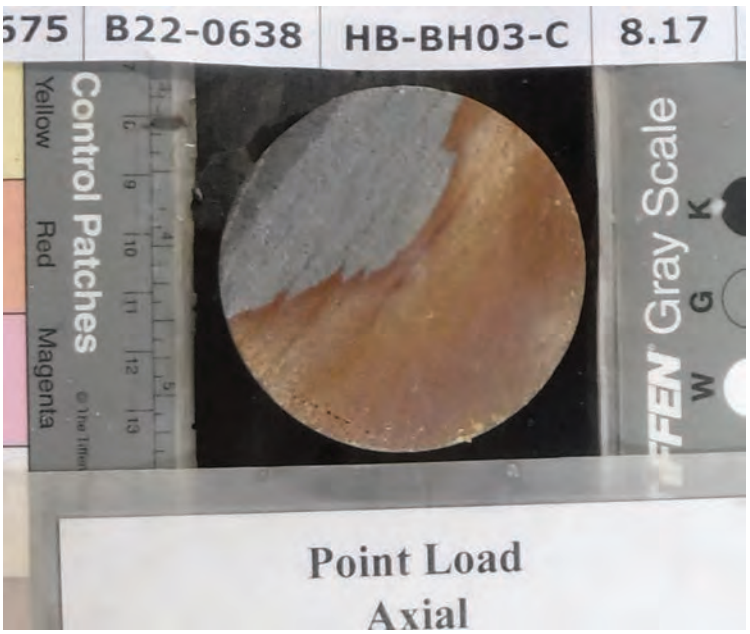
Gray Scale
Point Load
Axial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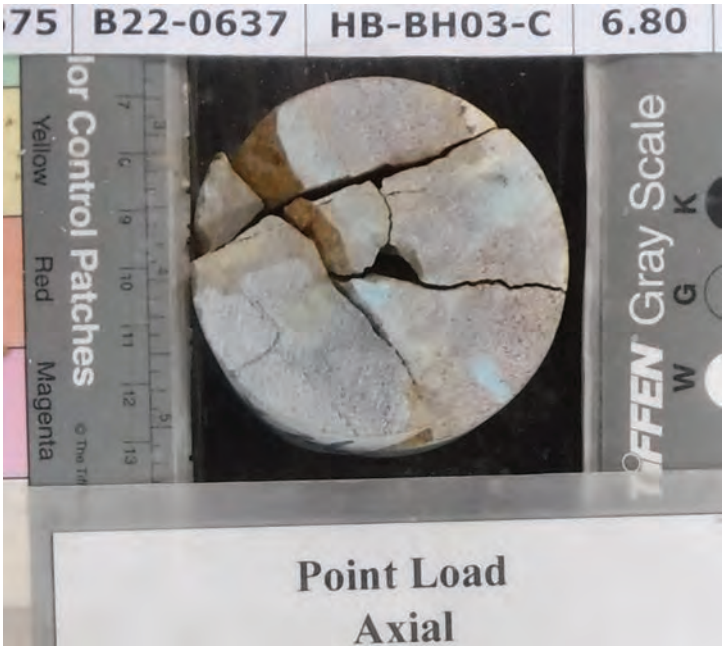
Gray Scale
Point Load
Axial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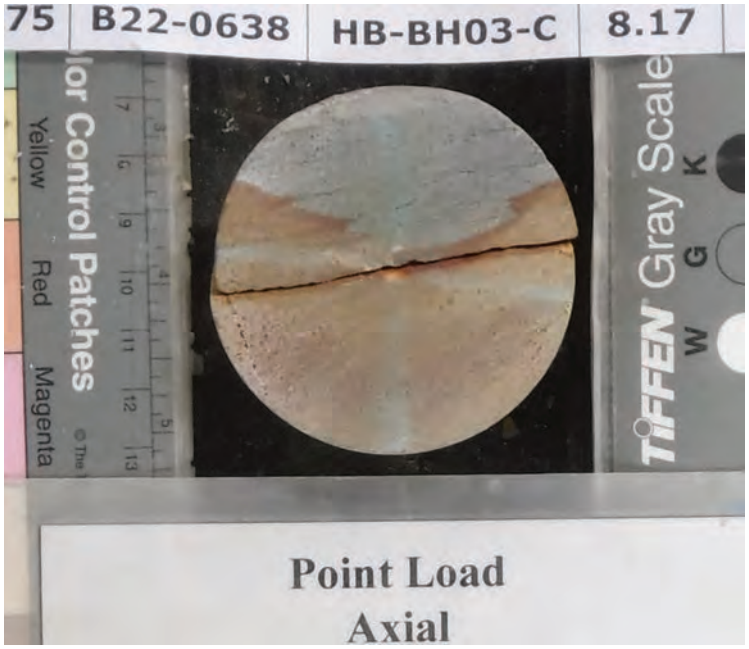
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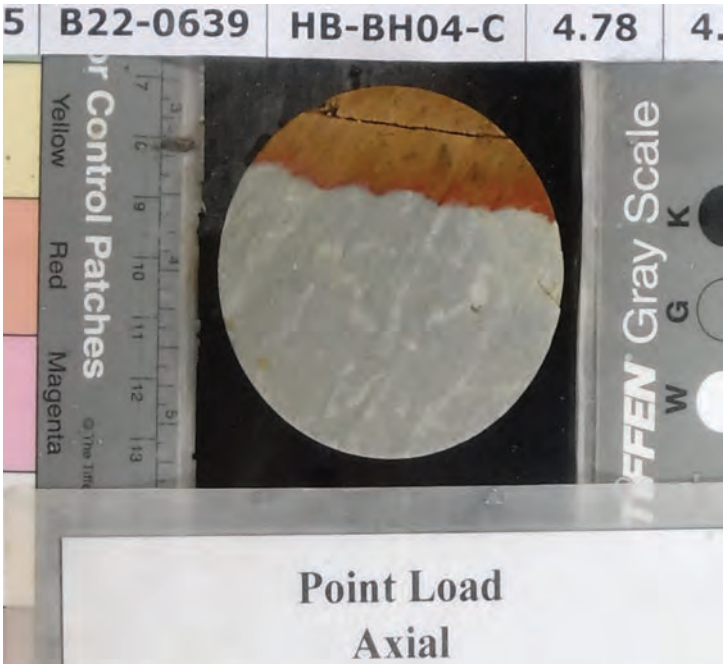
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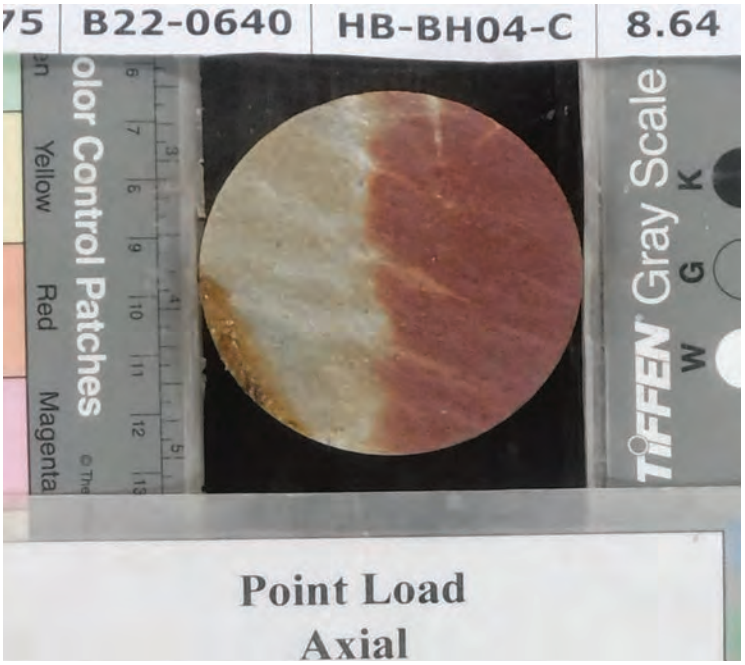
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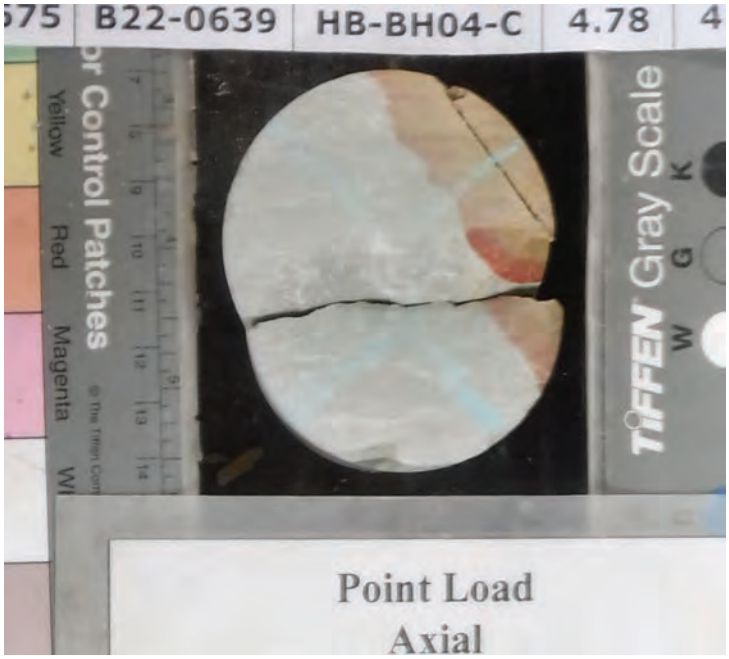
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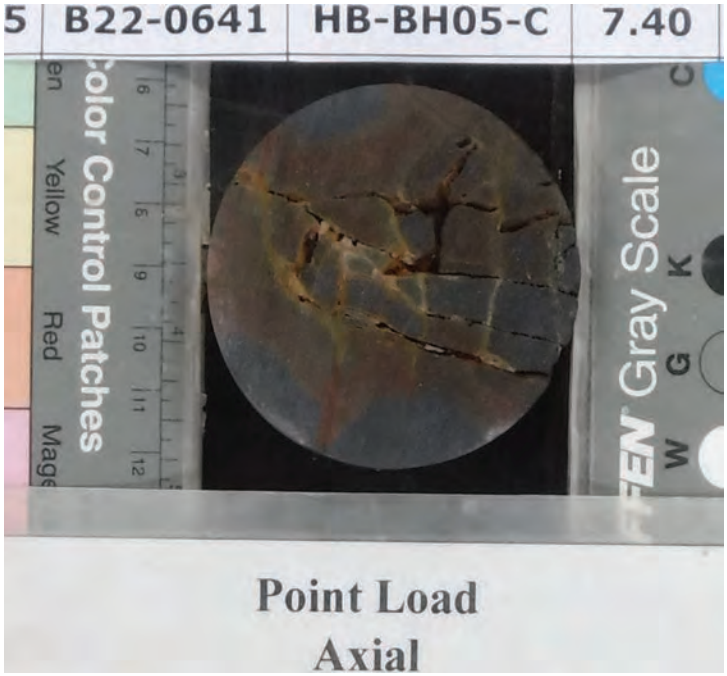
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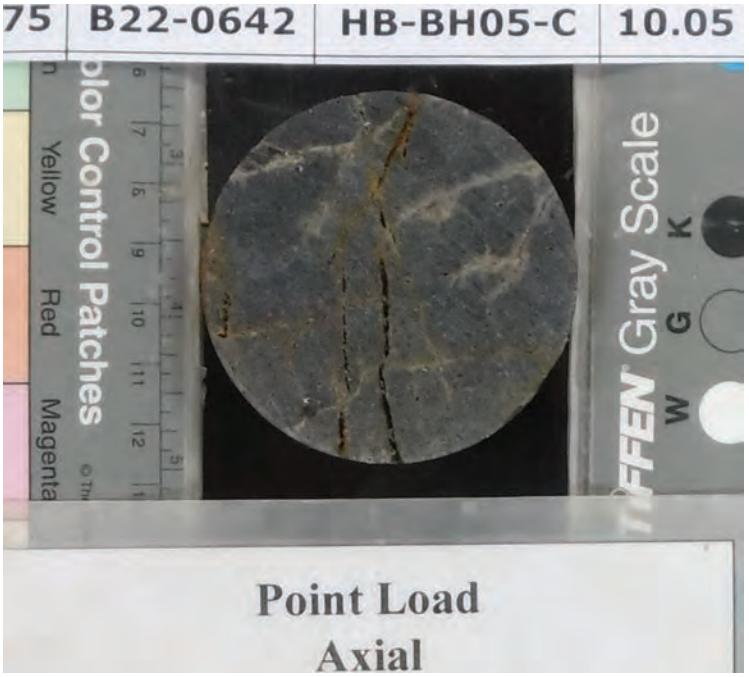
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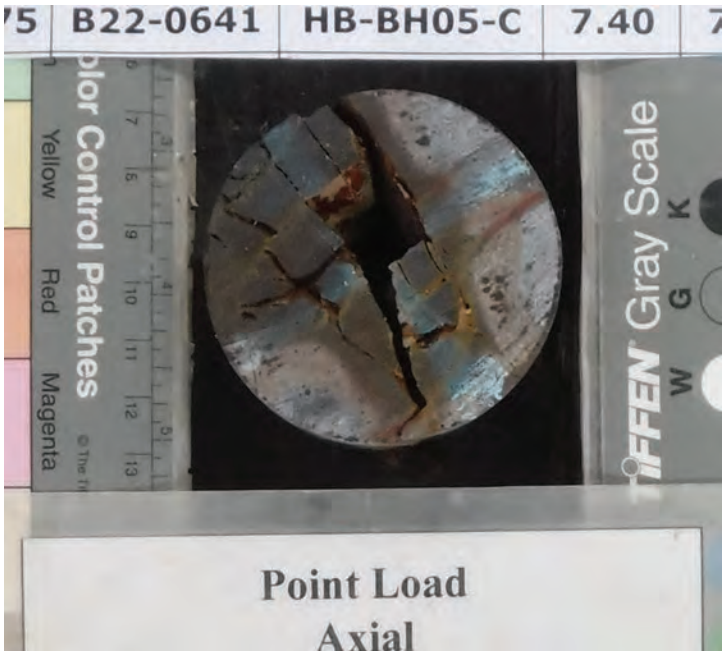
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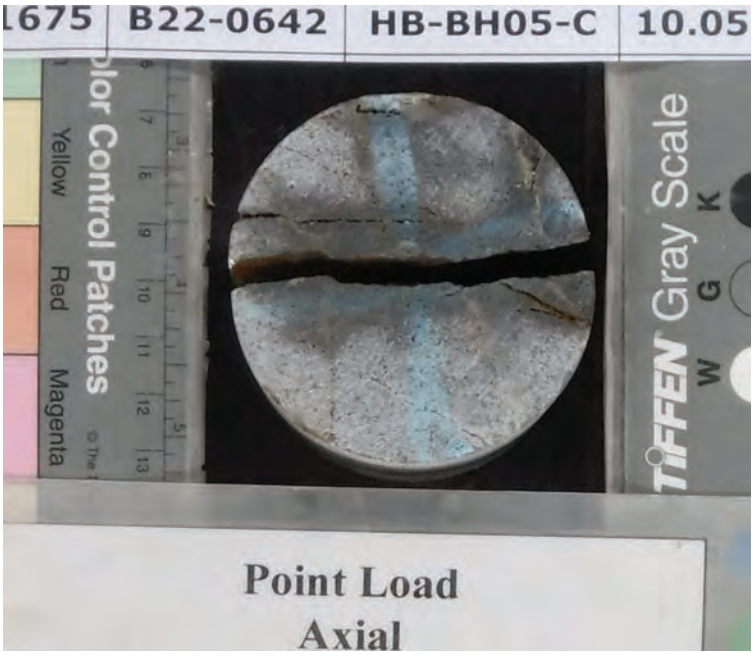
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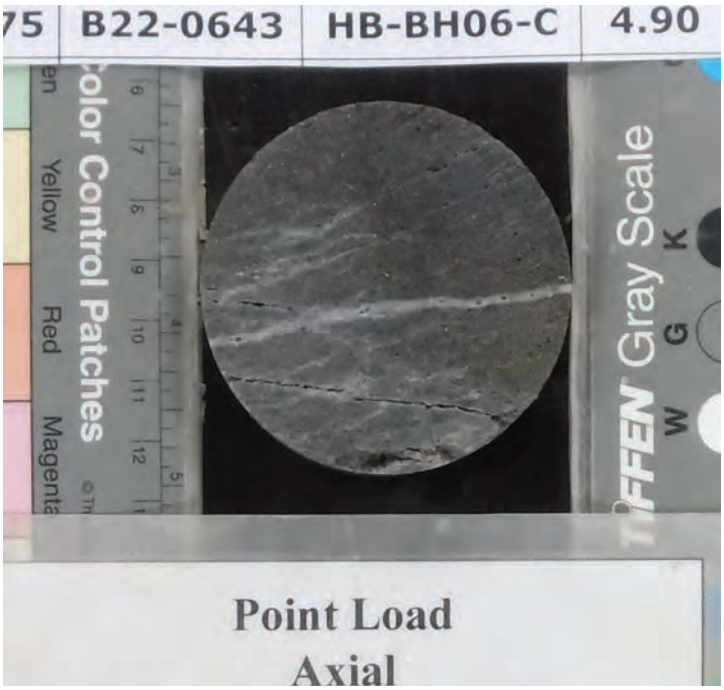
Point Load
Axial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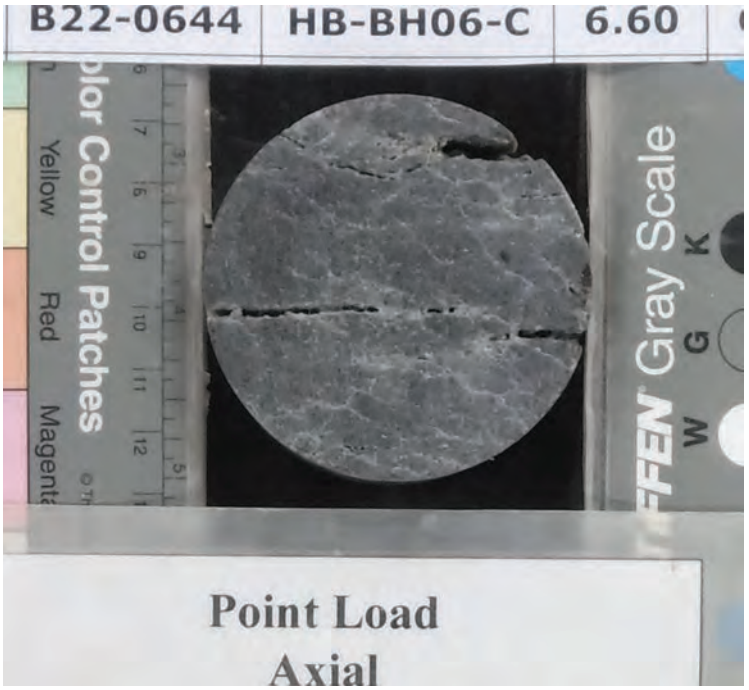
Point Load
Axial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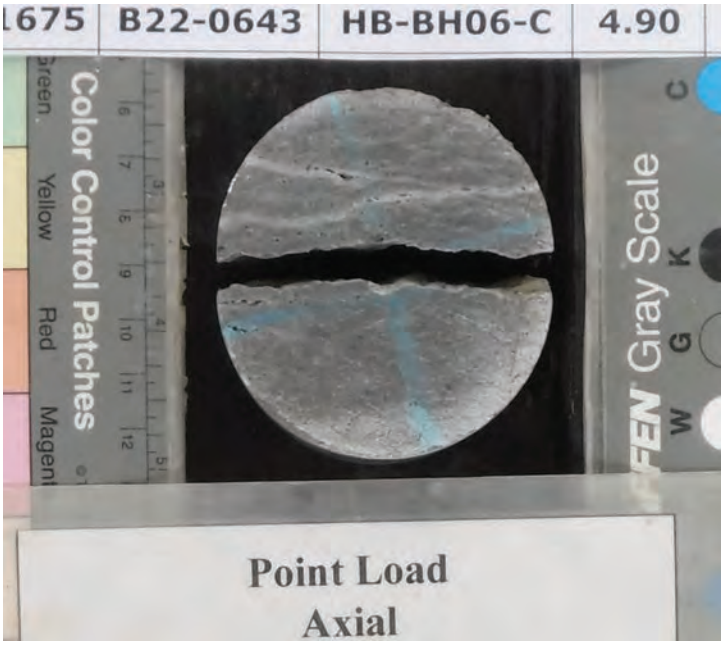
Point Load
Axial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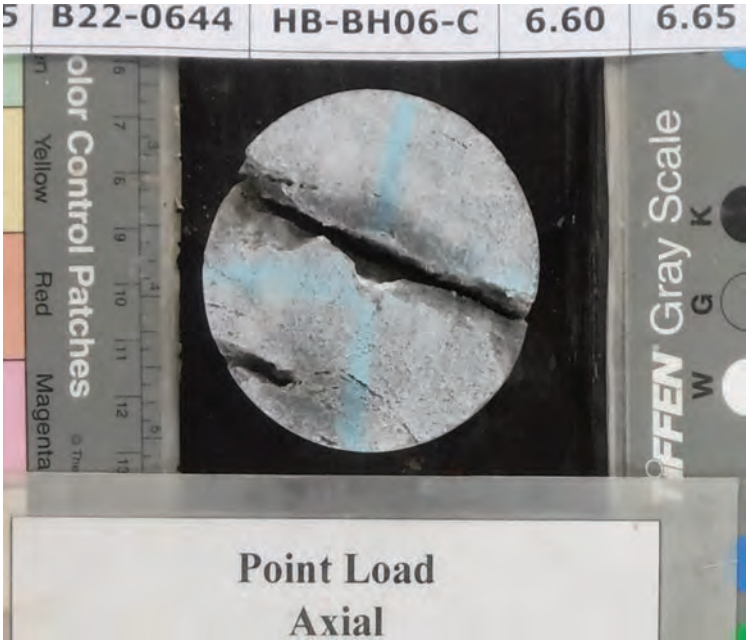
Gray Scale
Point Load
Axial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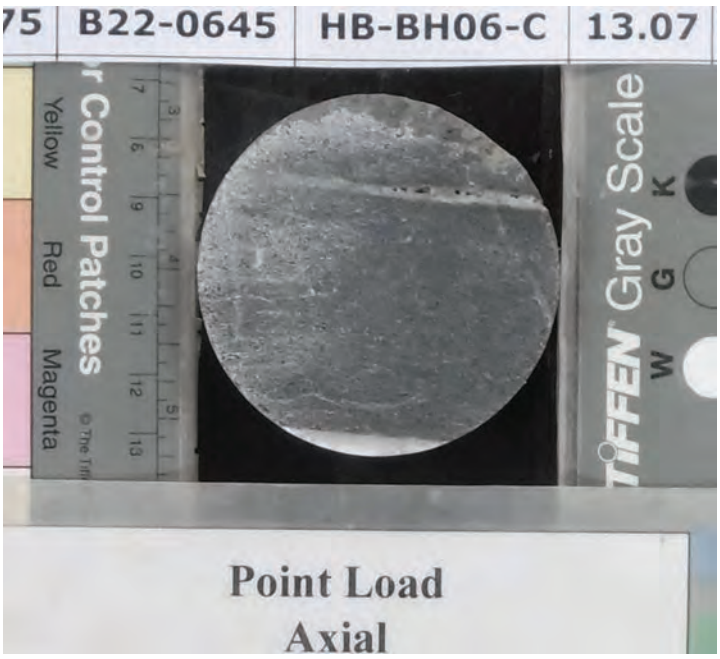
Point Load
Axial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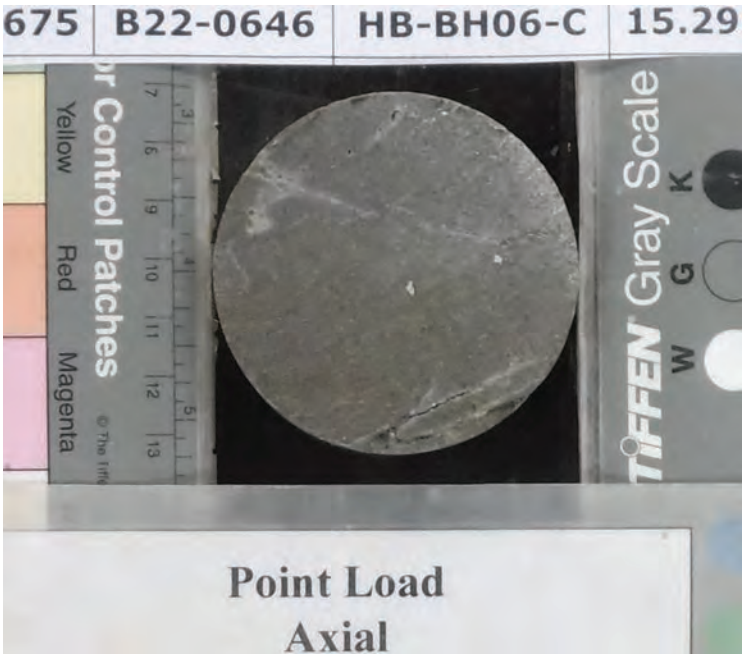
Magenta
Gray Scale
Point Load
Axial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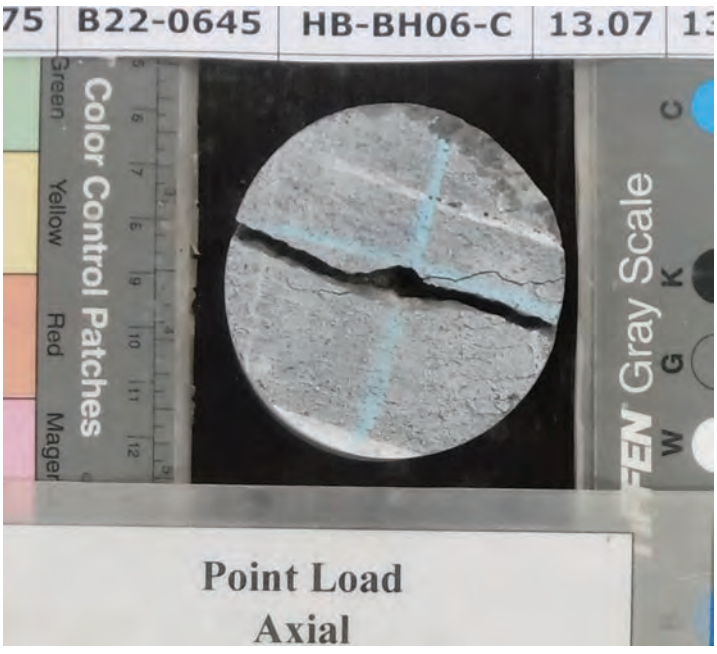
Color Control Patches
Yellow
Red
Magenta
Gray Scale
Point Load
Axial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Color Control Patches
Green
Yellow
Red
Gray Scale
Point Load
Axial

B22-0646 HB-BH06-C 15.29
Color Control Patches
Yellow
Red
Magenta
Gray Scale
Point Load
Axial

75 B22-0631 HB-BH01-C 3.77
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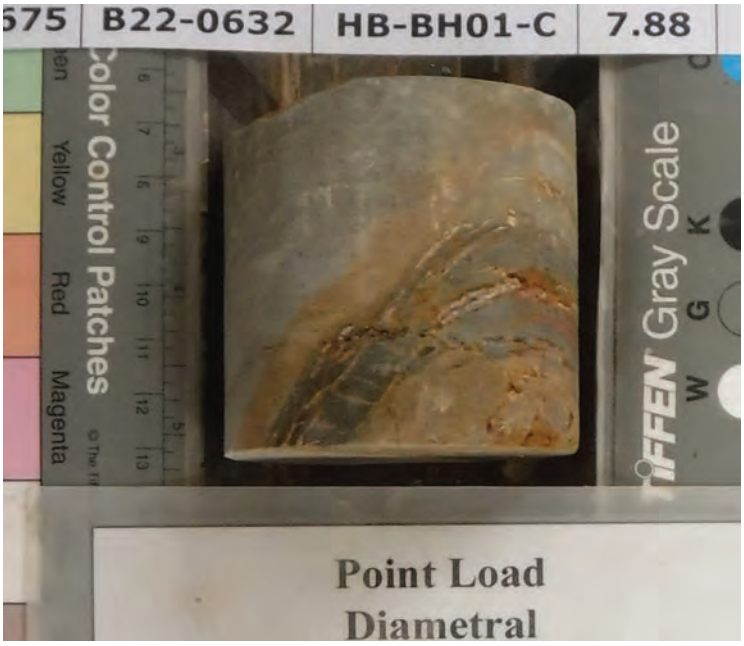
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral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Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

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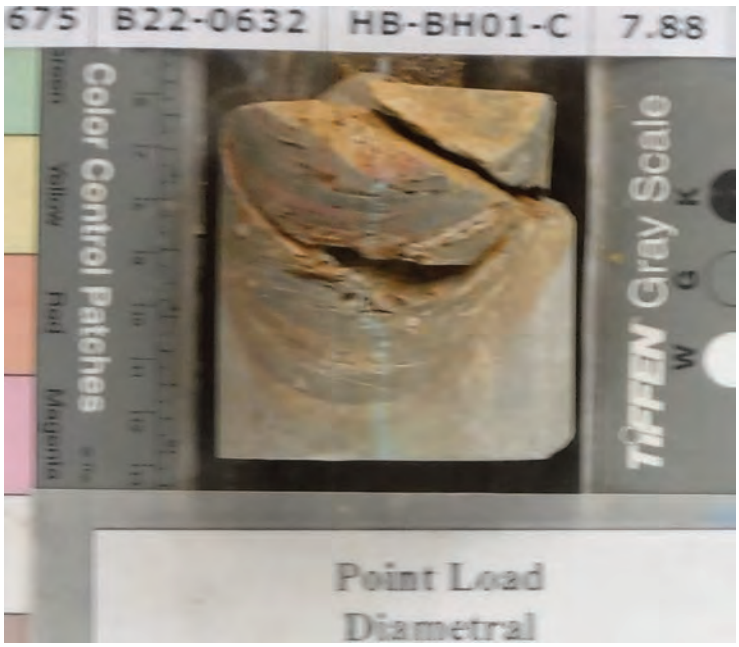
Color Control Patches
Yellow
Red
TIFFEN Gray Scale
Point Load
Diametral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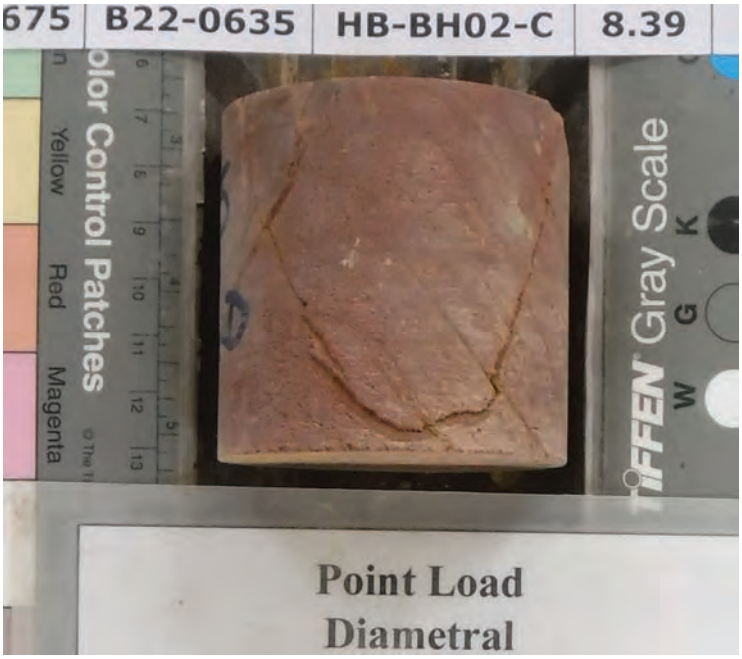
Color Control Patches
TIFFEN Gray Scale
Point Load
Diametral

B22-0634
HB-BH02-C
6.34
Color Control Patches
Gray Scale
Point Load
Diametral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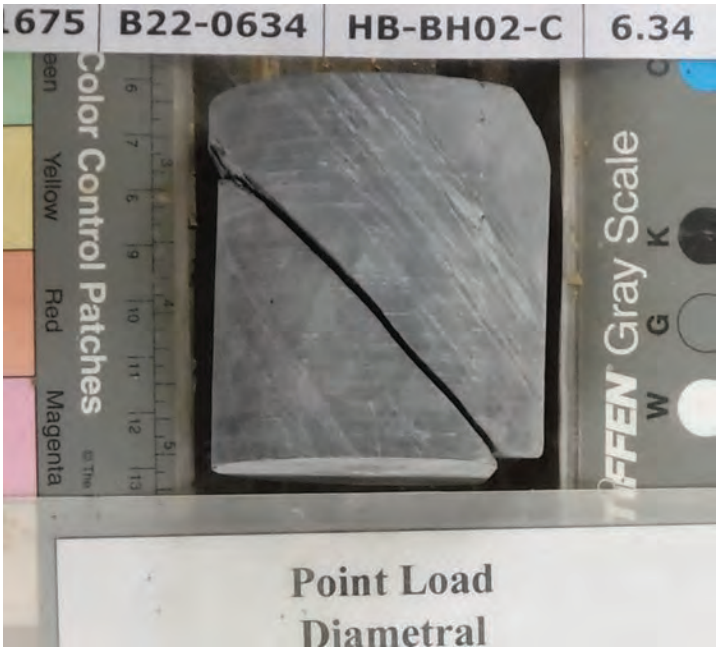
8.39
Color Control Patches
Gray Scale
Point Load
Diametral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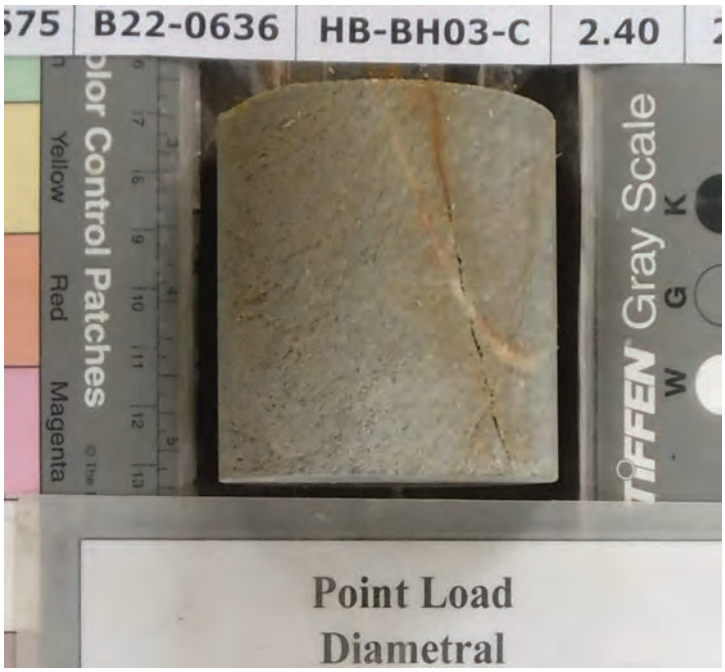
HB-BH02-C
6.34
Color Control Patches
Gray Scale
Point Load
Diametral

B22-0635
HB-BH02-C
8.39
Color Control Patches
Gray Scale
Point Load
Diametral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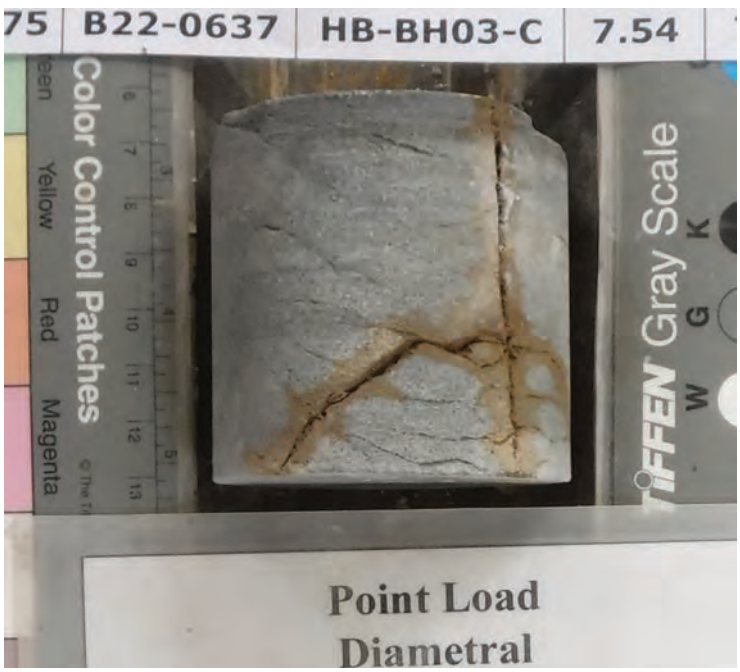
Yellow
Red
Magenta
TIFFEN Gray Scale
W G K
Point Load
Diametral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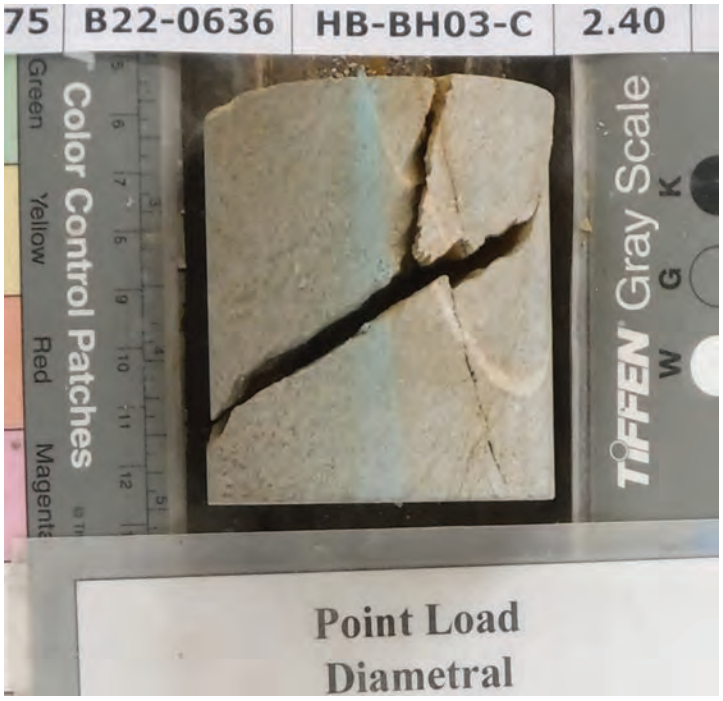
Red
Magenta
TIFFEN Gray Scale
W G K
Point Load
Diametral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Color Control Patches
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Yellow
Red
TIFFEN Gray Scale
W G K
Point Load
Diametral

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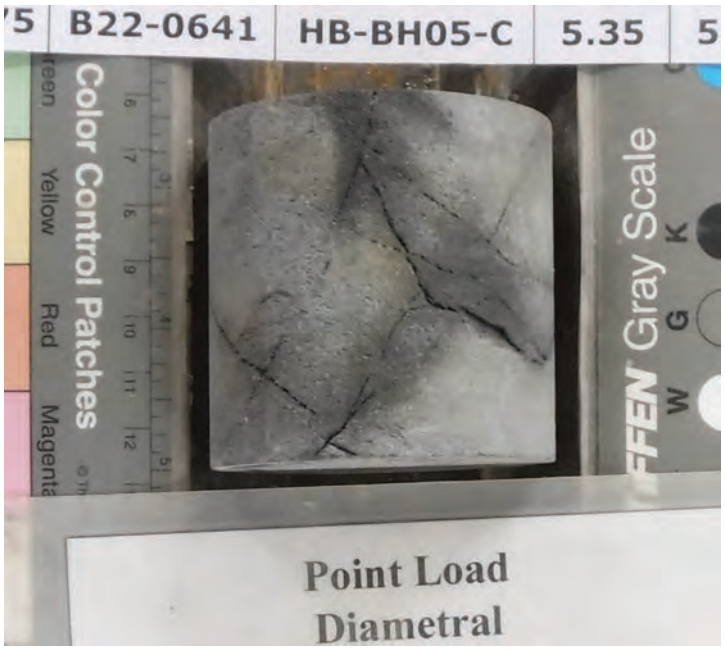
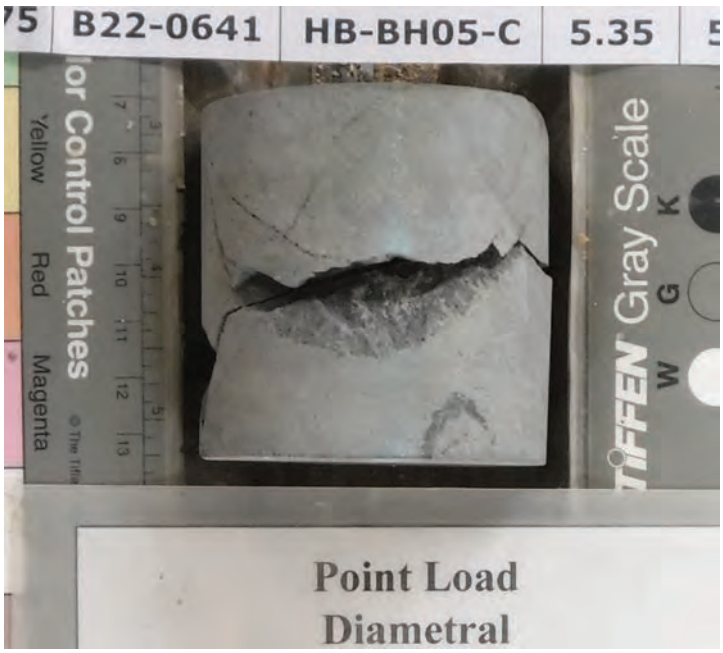
Color Control Patches
Green
Yellow
Red
Magenta
TIFFEN Gray Scale
W G K
Point Load
Diametral


B22-0641
HB-BH05-C
5.35
Color Control Patches
Gray Scale
Point Load
Diametral

B22-0642
HB-BH05-C
10.10
Color Control Patches
Gray Scale
Point Load
Diametral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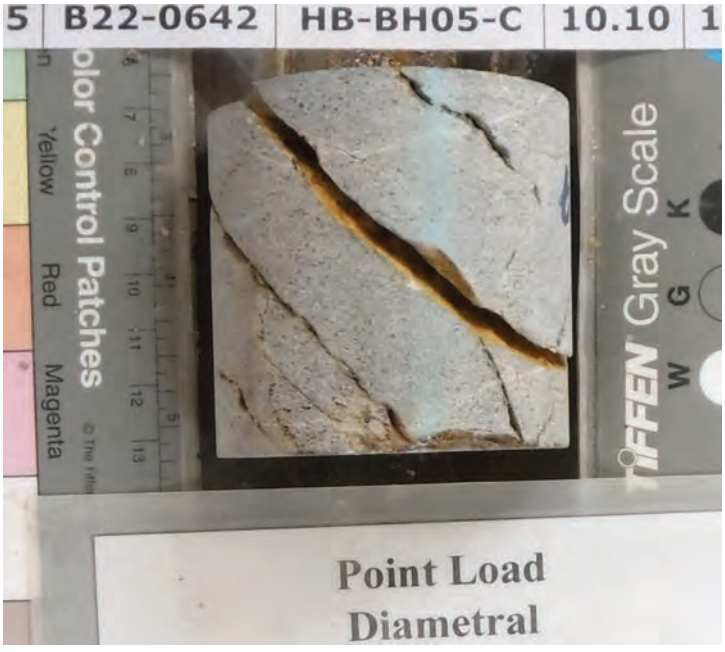
HB-BH05-C
5.35
Color Control Patches
Gray Scale
Point Load
Diametral


B22-0642
HB-BH05-C
10.10
Color Control Patches
Gray Scale
Point Load
Diametral

Bamford Rock Testing Services

239 Arden Street, North Melbourne, Vic 3051 Australia
Telephone: (03) 9329 2818 email : tests@bamfordrocks.com.au ABN: 78 167 341 693

NATA Accredited Facility No. 19523 Accredited for compliance with ISO/IEC 17025 - Testing

REPORT 1676
ON
ROCK TESTING

(BRTS JOB NUMBER 1676)

Client: Jacobs

Project: Heybridge Landfall – Heybridge, TAS

Reference: IS360318-002

24th March 2022

BRTS
Bamford Rock Testing Services

239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1676
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Landfall
Location: Heybridge, TAS
Reference: IS360318-002

AS 4133.1.1.1: Rock moisture content tests

As Received - Prepared specimen was placed in sealed plastic bag, and was soaked in water briefly, before testing commenced.

BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	**Moisture content (%)**
B22-0648	HL	Quartzwacke	HBLF-BH01-C	7.20	7.34	**0.9**
B22-0649	HL	Quartzwacke	HBLF-BH01-C	12.29	12.32	**1.2**
B22-0650	HL	Quartzwacke	HBLF-BH01-C	16.40	16.54	**1.3**
B22-0651	HL	Quartzwacke	HBLF-BH01-C	21.52	21.63	**1.0**
B22-0653	HL	Quartzwacke	HBLF-BH02-C	29.28	29.45	**1.2**
B22-0654	HL	Quartzwacke	HBLF-BH02-C	4.03	4.16	**2.9**
B22-0656	HL	Quartzwacke	HBLF-BH02-C	11.06	11.18	**3.1**
B22-0657	HL	Quartzwacke	HBLF-BH02-C	13.22	13.33	**1.2**
B22-0659	HL	Quartzwacke	HBLF-BH02-C	23.82	23.95	**2.1**
B22-0661	HL	Quartzwacke	HBLF-BH02-C	29.55	29.72	**3.0**

Date Tested: 14/03/2022

X
Dr W.E. Bamford
Director

X
Dr Darshika Palamakumbure
Lab Manager

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.1

Report no	**C007-0648**
Sample no	**B22-0648**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH01-C	**Depth (m)**	7.20 - 7.34

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.9	mm	**Rate of Deformation**	0.04	mm/min	**Dry Density**	2.644	**t/m^3**
Length	136.7	mm	**Stress Rate**	103	kPa/s	**Wet Density**	2.669	**t/m^3**
L/D Ratio	2.2		**Test Duration**	17 Min 44 Sec		**Axial Load @ Failure**	319.2	**kN**

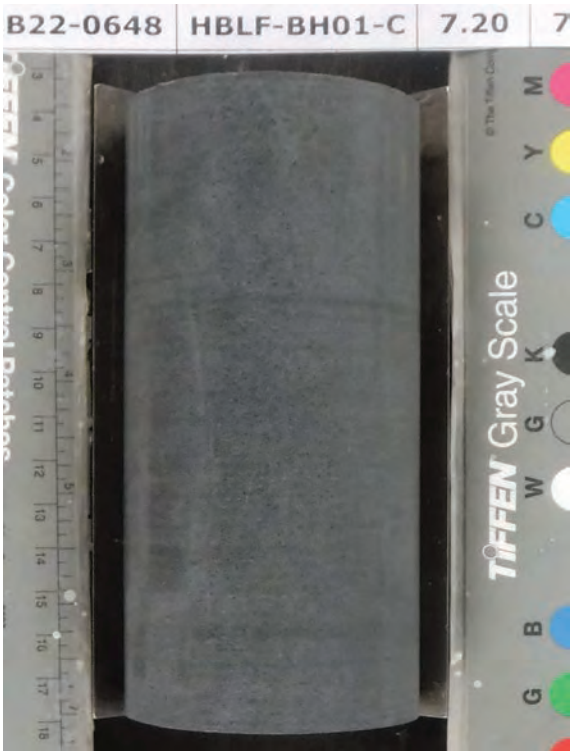
Testing Machine: MATEST CYBER-PLUS EVOLUTION 3MN

TEST RESULTS

UCS	**110**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**0.9**	**%**

Failure Mode
Axial cleavage, + shear through rock substance @ 31° to axis.

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.



Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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239 Arden St, North Melbourne VIC 3051
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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0650**
Sample no	**B22-0650**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH01-C	**Depth (m)**	16.40 - 16.54

SAMPLE DETAILS			TESTING DETAILS				
Diameter	60.9	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.555 **t/m^3**
Length	137.7	mm	**Stress Rate**	17	kPa/s	**Wet Density**	2.587 **t/m^3**
L/D Ratio	2.3		**Test Duration**	11 Min 47 Sec		**Axial Load @ Failure**	35.2 **kN**

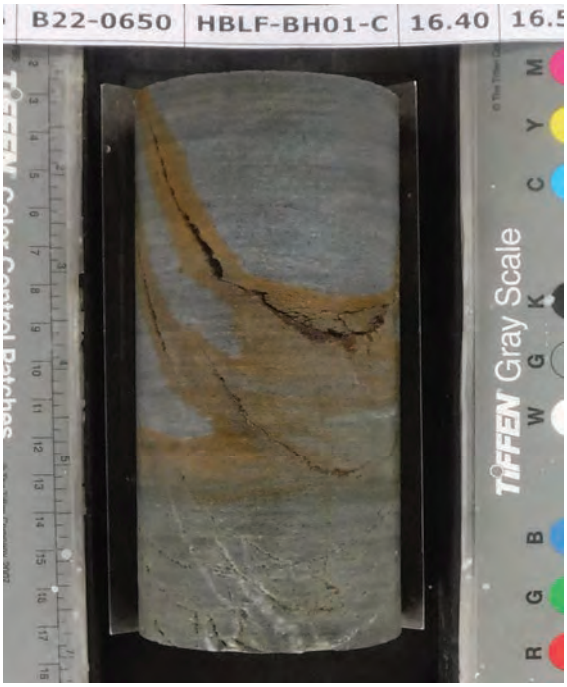
Testing Machine ECT-300EDC 300KN

TEST RESULTS

UCS	**12**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**1.3**	**%**

Failure Mode
Shear on limonite coated joint @ 25° to axis.

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.



Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X Dr W.E. Bamford
Director

X Dr D. Palamakumbure
Lab Manager

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0651**
Sample no	**B22-0651**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH01-C	**Depth (m)**	21.52 - 21.63

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.9	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.622	**t/m^3**
Length	111.6	mm	**Stress Rate**	17	kPa/s	**Wet Density**	2.647	**t/m^3**
L/D Ratio	1.8	*	**Test Duration**	10 Min 40 Sec		**Axial Load @ Failure**	32.2	**kN**

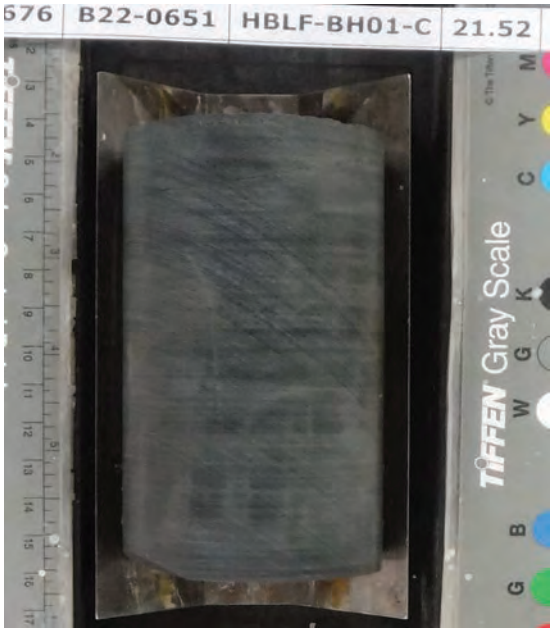
Testing Machine ECT-300EDC 300KN

TEST RESULTS

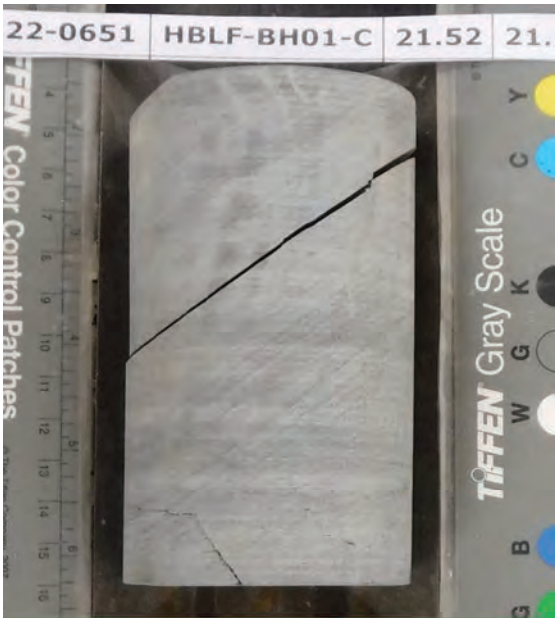
UCS	**11**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (ν)	-	
Moisture Content	**1.0**	**%**

Failure Mode
Shear on bedding @ 48° to axis.

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.



Before Test



After Test

Note: L/D Ratio as tested is less than the "standard" ratio of 2.0

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0653**
Sample no	**B22-0653**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH01-C	**Depth (m)**	29.28 - 29.45

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.9	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.625	**t/m^3**
Length	165.1	mm	**Stress Rate**	13	kPa/s	**Wet Density**	2.656	**t/m^3**
L/D Ratio	2.7		**Test Duration**	11 Min 54 Sec		**Axial Load @ Failure**	26.2	**kN**

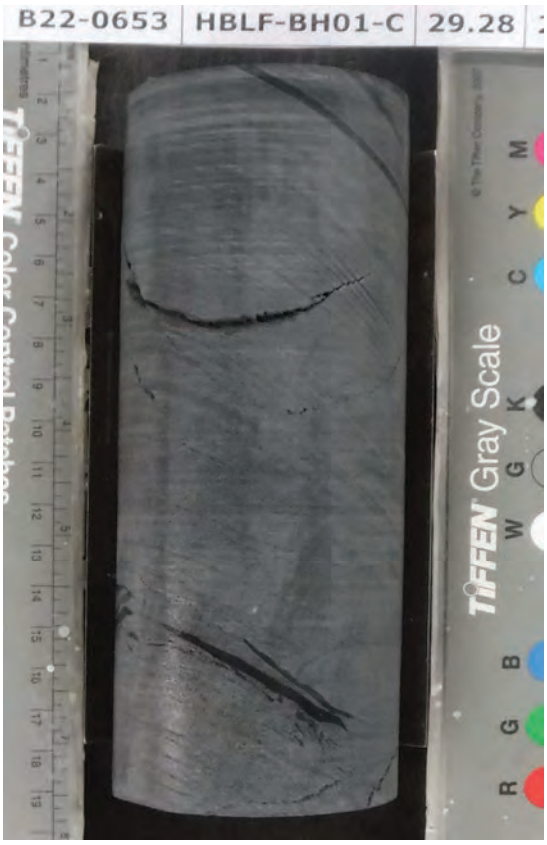
Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on bedding @ 47° to axis, + conjugate shear on joint @ 38° to axis.

TEST RESULTS

UCS	**9.0**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**1.2**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.



Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0654**
Sample no	**B22-0654**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH02-C	**Depth (m)**	4.03 - 4.16

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.9	mm	**Rate of Deformation**	0.07	mm/min	**Dry Density**	2.474	**t/m^3**
Length	130.9	mm	**Stress Rate**	3	kPa/s	**Wet Density**	2.545	**t/m^3**
L/D Ratio	2.1		**Test Duration**	13 Min 39 Sec		**Axial Load @ Failure**	6.5	**kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Stepped shears on limonite coated bedding @ 41° to axis.

TEST RESULTS

UCS	**2.2**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (ν)	-	
Moisture Content	**2.9**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0656**
Sample no	**B22-0656**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH02-C	**Depth (m)**	11.06 - 11.18

SAMPLE DETAILS			TESTING DETAILS				
Diameter	60.9	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.489 **t/m^3**
Length	117.9	mm	**Stress Rate**	9	kPa/s	**Wet Density**	2.565 **t/m^3**
L/D Ratio	1.9	*	**Test Duration**	25 Min 39 Sec		**Axial Load @ Failure**	41.6 **kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on bedding @ 59° to axis, + axial cleavage.

TEST RESULTS

UCS	**14**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**3.1**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

Note: L/D Ratio as tested is less than the "standard" ratio of 2.0

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0657**
Sample no	**B22-0657**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH02-C	**Depth (m)**	13.22 - 13.33

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.9	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.571	**t/m^3**
Length	107.8	mm	**Stress Rate**	15	kPa/s	**Wet Density**	2.601	**t/m^3**
L/D Ratio	1.8	*	**Test Duration**	15 Min 24 Sec		**Axial Load @ Failure**	40.1	**kN**

Testing Machine ECT-300EDC 300KN

Failure Mode
Shear on bedding @ 29° to axis.

TEST RESULTS

UCS	**14**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**1.2**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

Note: L/D Ratio as tested is less than the "standard" ratio of 2.0

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

NATA ACCREDITED FOR TECHNICAL COMPETENCE

BRTS
Bamford Rock Testing Services

NATA Accredited Facility No. 19523
239 Arden St, North Melbourne VIC 3051
Ph: (03) 9329 2818

UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0659**
Sample no	**B22-0659**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH02-C	**Depth (m)**	23.82 - 23.95

SAMPLE DETAILS			TESTING DETAILS				
Diameter	60.9	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.557 t/m^3
Length	133.6	mm	**Stress Rate**	14	kPa/s	**Wet Density**	2.610 t/m^3
L/D Ratio	2.2		**Test Duration**	16 Min 33 Sec		**Axial Load @ Failure**	39.7 kN

Testing Machine ECT-300EDC 300KN

TEST RESULTS

UCS	**14**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**2.1**	**%**

Failure Mode
Multiple axial cleavages.

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X Dr W.E. Bamford
Director

X Dr D. Palamakumbure
Lab Manager

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BRTS
Bamford Rock Testing Services

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UNIAXIAL COMPRESSIVE STRENGTH
AS 4133.4.2.2

Report no	**C007-0661**
Sample no	**B22-0661**
Client No.	**C007**
Date	22/03/2022
Date Tested	18/03/2022
Tested by	JC
Checked by	DP

Client Jacobs **Reference** IS360318-002
Project Heybridge Landfall
Location Heybridge, TAS

Lithology	Quartzwacke	**Sample Location**	HL
Borehole	HBLF-BH02-C	**Depth (m)**	29.55 - 29.72

SAMPLE DETAILS			TESTING DETAILS					
Diameter	60.8	mm	**Rate of Deformation**	0.08	mm/min	**Dry Density**	2.587	t/m^3
Length	164.4	mm	**Stress Rate**	8	kPa/s	**Wet Density**	2.665	t/m^3
L/D Ratio	2.7		**Test Duration**	18 Min 59 Sec		**Axial Load @ Failure**	27.7	kN

Testing Machine ECT-300EDC 300KN

Failure Mode
Axial cleavage.

TEST RESULTS

UCS	**9.5**	**MPa**
Young's modulus E	-	**GPa**
Poisson's ratio (v)	-	
Moisture Content	**3.0**	**%**

Sample Storage Comments
Sample was left wrapped in plastic, as received (wet condition), until removed for specimen preparation. Prepared specimen was placed in a sealed plastic bag, and was soaked in water briefly, before testing commenced.

Before Test

After Test

References

Failure Mode: AS 4133.4.3.2- 2013
Rock porosity and density tests: AS 4133.2.1.1 - 2005
Moisture Content: AS 4133.1.1.1 - 2005

Approved by :

X _____ Dr W.E. Bamford, Director

X _____ Dr D. Palamakumbure, Lab Manager

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BRTS
Bamford Rock Testing Services
239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1676
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Landfall
Location: Heybridge, TAS
Reference: IS360318-002

AS 4133.4.1 Rock strength tests - Determination of point load strength index

Sample Storage Comments
After sample preparation, samples were placed in resealable bags and were soaked in water briefly, before testing .

AXIAL POINT LOAD STRENGTH INDEX

BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	Uncorrected Point Load Strength Index (Is) (MPa)	Point Load Strength Index ($I_{s(50)}$) (MPa)	Indentation Hardness Index (IHI) (kN/mm)	*Failure Mode*
B22-0647	HL	Quartzwacke	HBLF-BH01-C	6.90	6.95	6.4	**6.9**	3.96	*4*
B22-0648	HL	Quartzwacke	HBLF-BH01-C	9.38	9.43	4.7	**5.0**	4.51	*1*
B22-0649	HL	Quartzwacke	HBLF-BH01-C	12.32	12.37	11	**12**	5.65	*1*
B22-0650	HL	Quartzwacke	HBLF-BH01-C	18.75	18.80	2.9	**3.1**	2.60	*4*
B22-0651	HL	Quartzwacke	HBLF-BH01-C	19.81	19.86	0.33	**0.36**	0.27	*2*
B22-0652	HL	Quartzwacke	HBLF-BH01-C	26.71	26.76	0.60	**0.64**	0.55	*3*
B22-0653	HL	Quartzwacke	HBLF-BH01-C	27.32	27.37	3.8	**4.0**	1.74	*3*
B22-0654	HL	Quartzwacke	HBLF-BH02-C	3.90	3.95	1.9	**2.1**	2.12	*2*
B22-0655	HL	Quartzwacke	HBLF-BH02-C	8.24	8.29	2.1	**2.3**	1.77	*1*
B22-0656	HL	Quartzwacke	HBLF-BH02-C	10.82	10.87	6.8	**7.2**	5.28	*1*
B22-0657	HL	Quartzwacke	HBLF-BH02-C	16.05	16.10	4.6	**4.9**	3.29	*1*
B22-0658	HL	Quartzwacke	HBLF-BH02-C	18.43	18.48	2.1	**2.2**	2.27	*1,2*
B22-0659	HL	Quartzwacke	HBLF-BH02-C	24.17	24.22	0.72	**0.77**	0.62	*2*
B22-0660	HL	Quartzwacke	HBLF-BH02-C	27.80	27.85	0.34	**0.37**	0.51	*1,2*
B22-0661	HL	Quartzwacke	HBLF-BH02-C	29.72	29.77	0.96	**1.0**	1.15	*2*

Date tested 18/03/2022

Failure Mode: 1. Fracture through rock substance, not influenced by weak planes 2. Fracture along bedding
3. Fracture influenced by pre-existing plane, microfracture, vein, chemical alteration 4. Chip or partial failure 5. Did not fail

X
Dr W.E. Bamford
Director

X
Dr D. Palamakumbure
Lab Manager

BRTS
Bamford Rock Testing Services
239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1676
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Landfall
Location: Heybridge, TAS
Reference: IS360318-002

AS 4133.4.1 Rock strength tests - Determination of point load strength index

Sample Storage Comments
After sample preparation, samples were placed in resealable bags and were soaked in water briefly, before testing .

DIAMETRAL POINT LOAD STRENGTH INDEX

BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	Failure Load (P) (kN)	Point Load Strength Index ($I_{s(50)}$) (MPa)	Indentation Hardness Index (IHI) (kN/mm)	*Failure Mode*
B22-0650	HL	Quartzwacke	HBLF-BH01-C	16.84	16.90	2.0	**0.60**	0.83	*3*
B22-0651	HL	Quartzwacke	HBLF-BH01-C	19.86	19.92	5.8	**1.7**	0.60	*1,3*
B22-0658	HL	Quartzwacke	HBLF-BH02-C	17.30	17.36	4.8	**1.3**	0.67	*1,2*
B22-0660	HL	Quartzwacke	HBLF-BH02-C	28.68	28.74	1.2	**0.35**	0.39	*2*

Date tested 18/03/2022

Failure Mode: 1. Fracture through rock substance, not influenced by weak planes 2. Fracture along bedding
3. Fracture influenced by pre-existing plane, microfracture, vein, chemical alteration 4. Chip or partial failure 5. Did not fail

X
Dr W.E. Bamford
Director

X
Dr D. Palamakumbure
Lab Manager

BRTS
Bamford Rock Testing Services
239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Test Request No. : 1676
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Landfall
Location: Heybridge, TAS
Reference: IS360318-002

AS 4133.4.1 Rock strength tests - Determination of point load strength index

Sample Storage Comments
After sample preparation, samples were placed in resealable bags and were soaked in water briefly, before testing .

IRREGULAR POINT LOAD STRENGTH INDEX

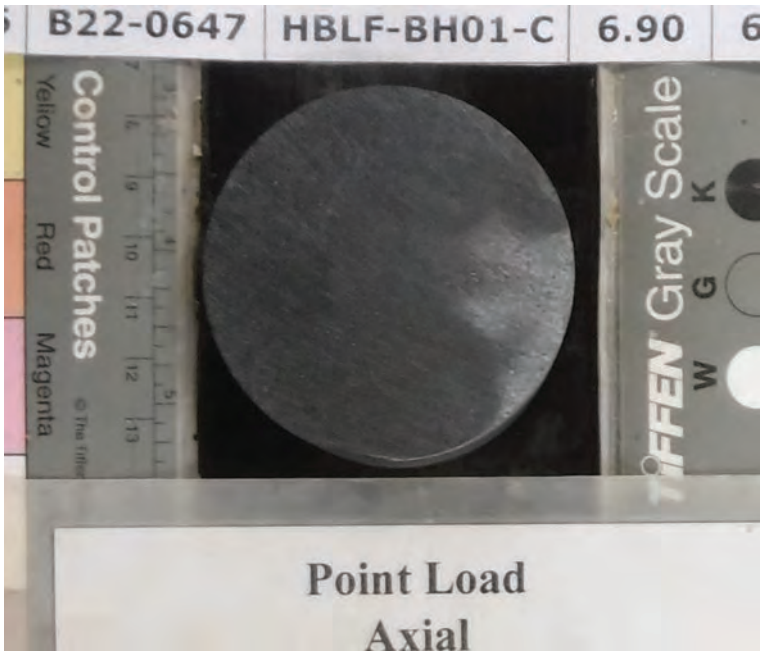
BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	Uncorrected Point Load Strength Index (Is) (MPa)	Point Load Strength Index (Is(50)) (MPa)	Indentation Hardness Index (IHI) (kN/mm)	*Failure mode*
B22-0652	HL	Quartzwacke	HBLF-BH01-C	25.77	25.87	0.38	**0.42**	0.12	*3*

Date tested 18/03/2022

Failure Mode: 1. Fracture through rock substance, not influenced by weak planes 2. Fracture along bedding
3. Fracture influenced by pre-existing plane, microfracture, vein, chemical alteration 4. Chip or partial failure 5. Did not fail

X
Dr W.E. Bamford
Director

X
Dr D. Palamakumbure
Lab Manager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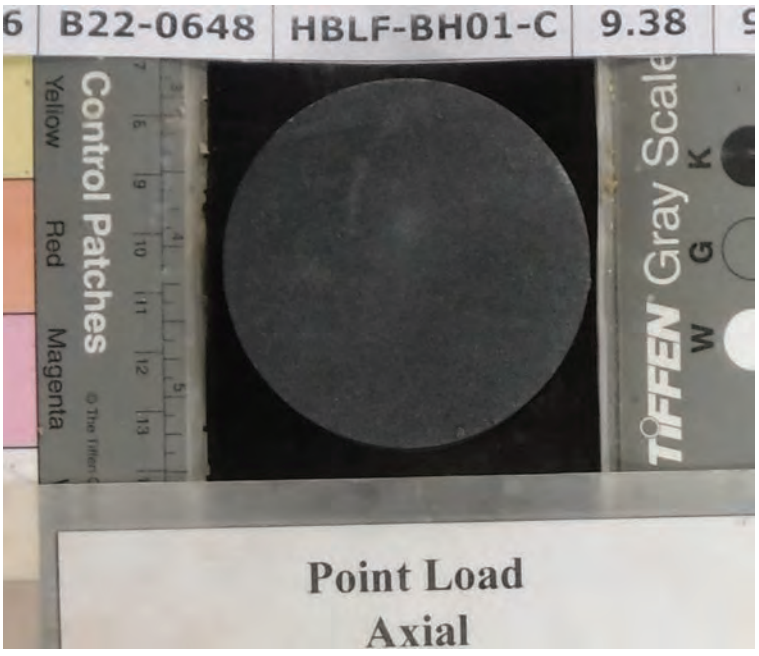
Magenta
TIFFEN Gray Scale
W G K
Point Load
Axial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W G K
Point Load
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TIFFEN Gray Scale
W G K
Point Load
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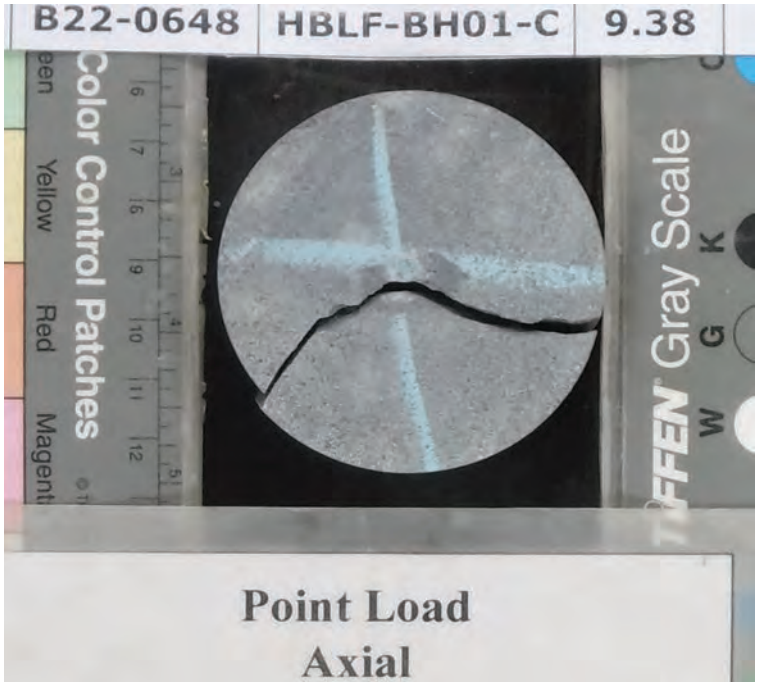
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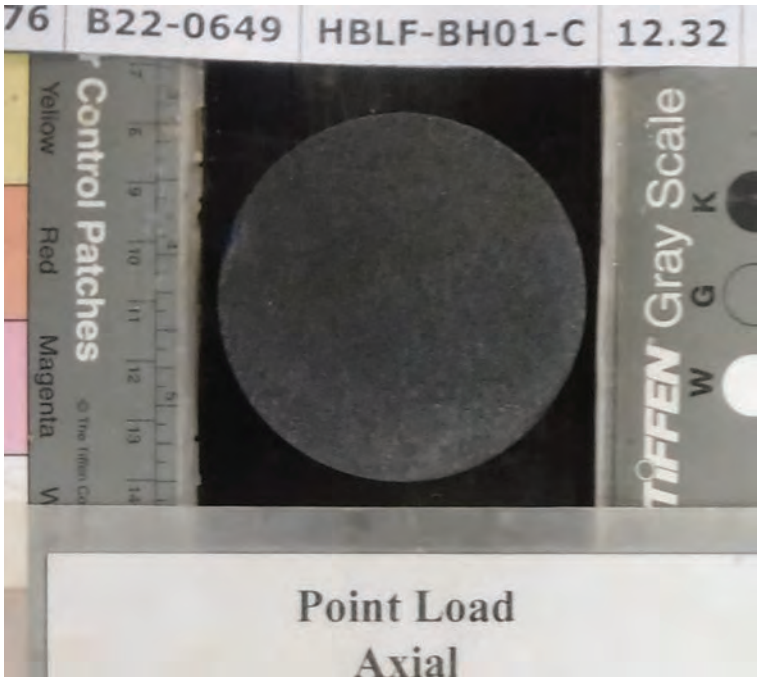
W G K
Point Load
Axial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Gray Scale
Point Load
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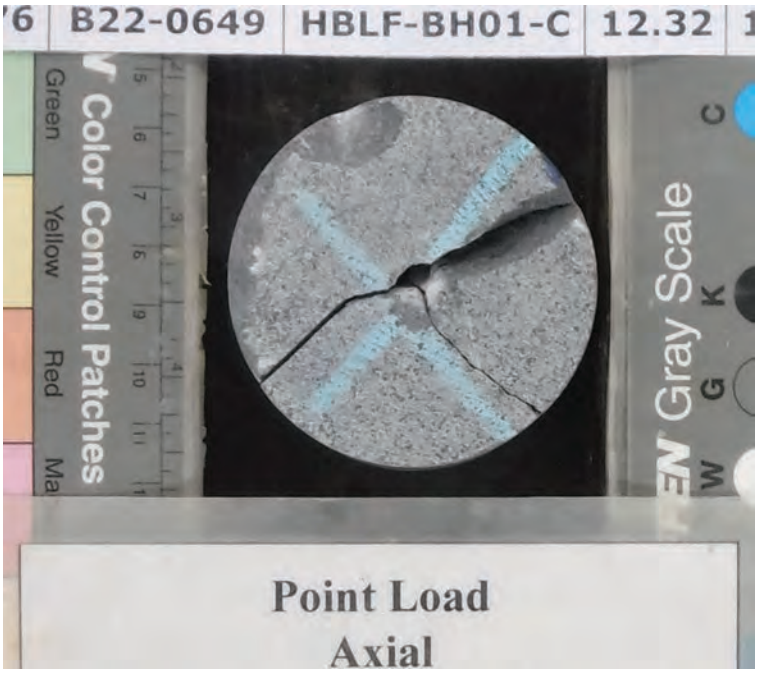
Red
Magenta
Gray Scale
Point Load
Axial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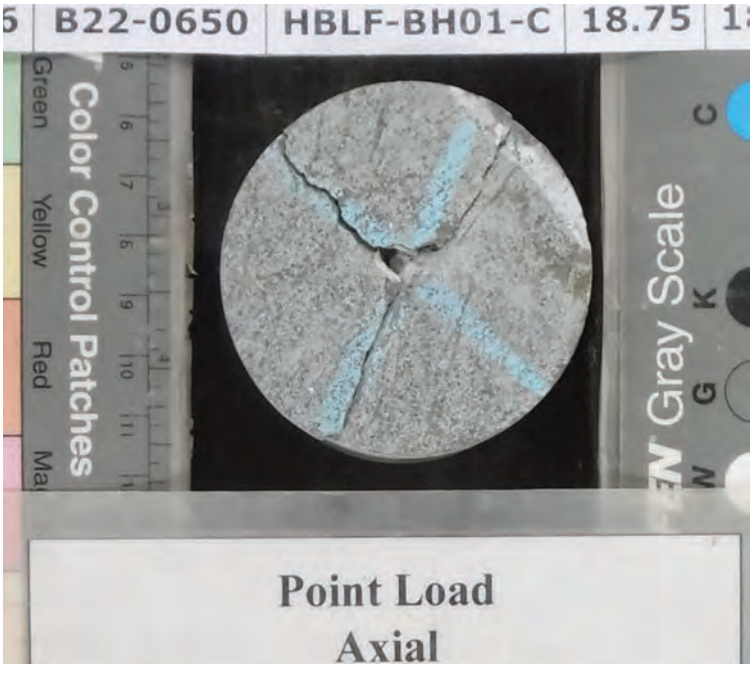
Point Load
Axial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Gray Scale
Point Load
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W G K
Point Load
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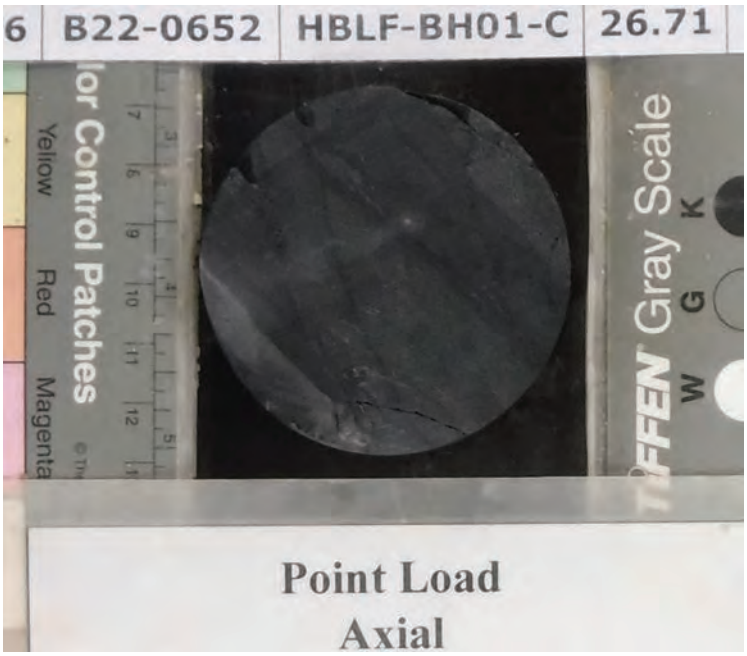
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W G K
Point Load
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W G K
Point Load
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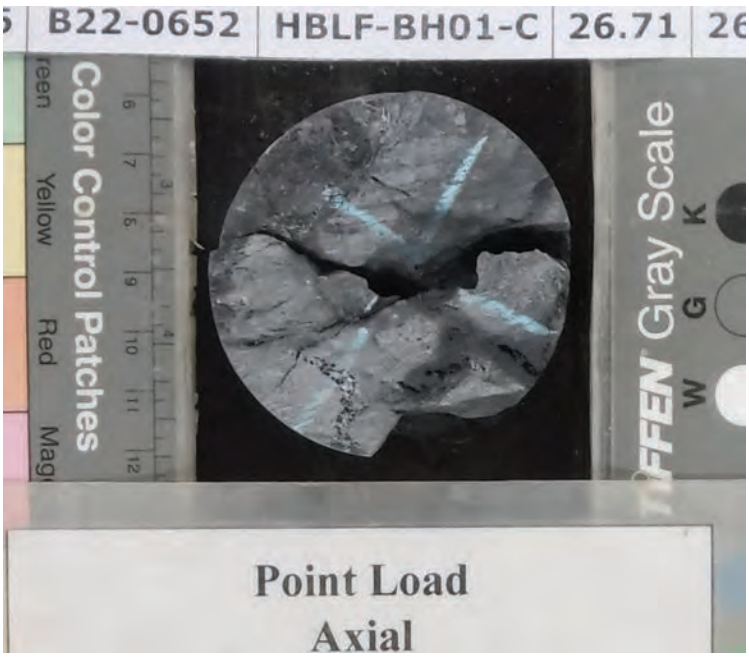
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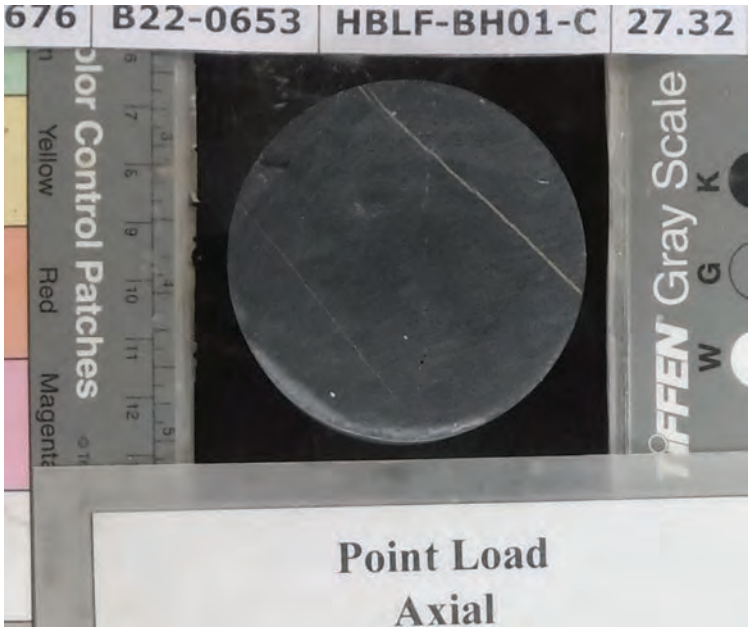
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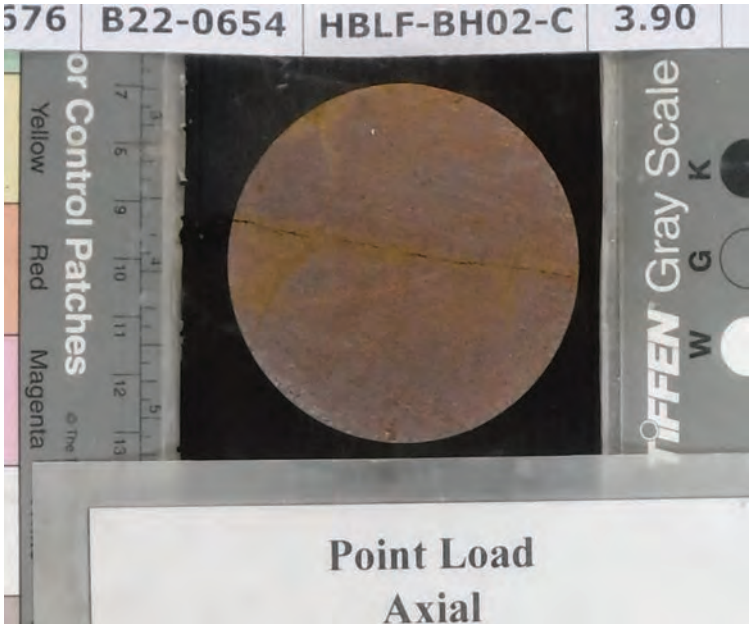
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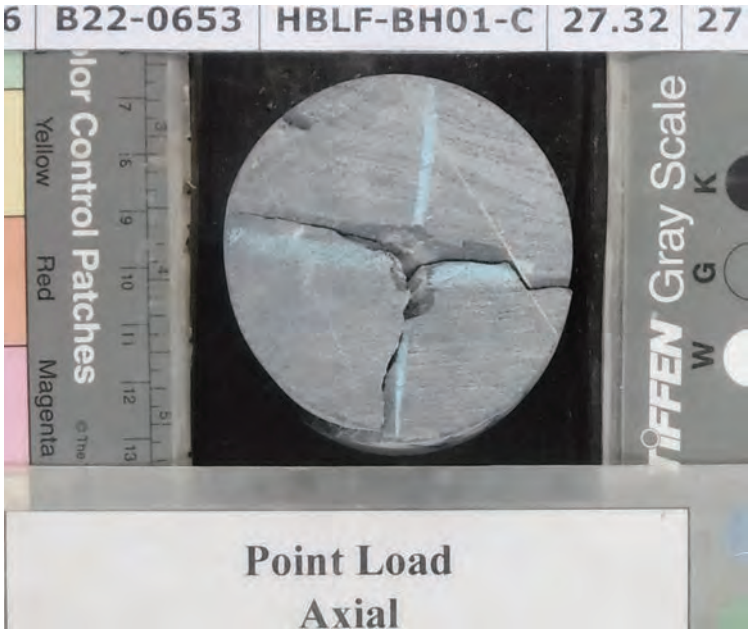
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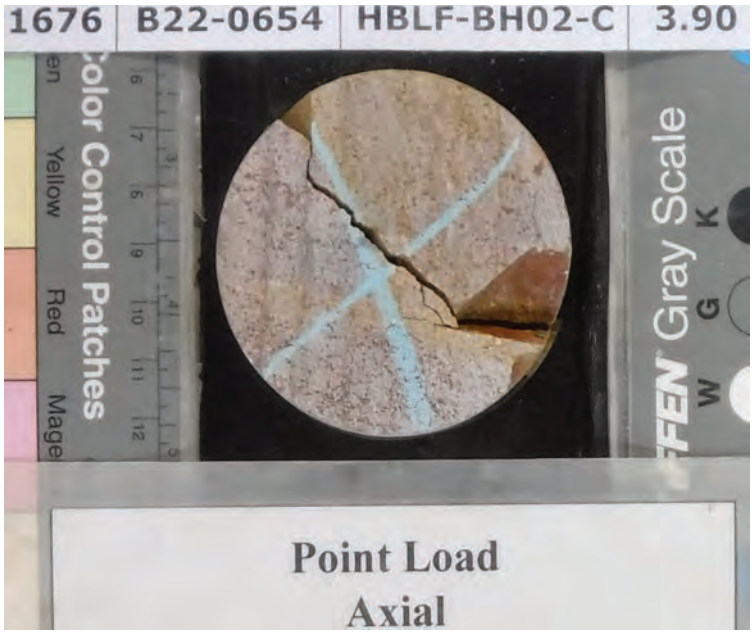
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Point Load
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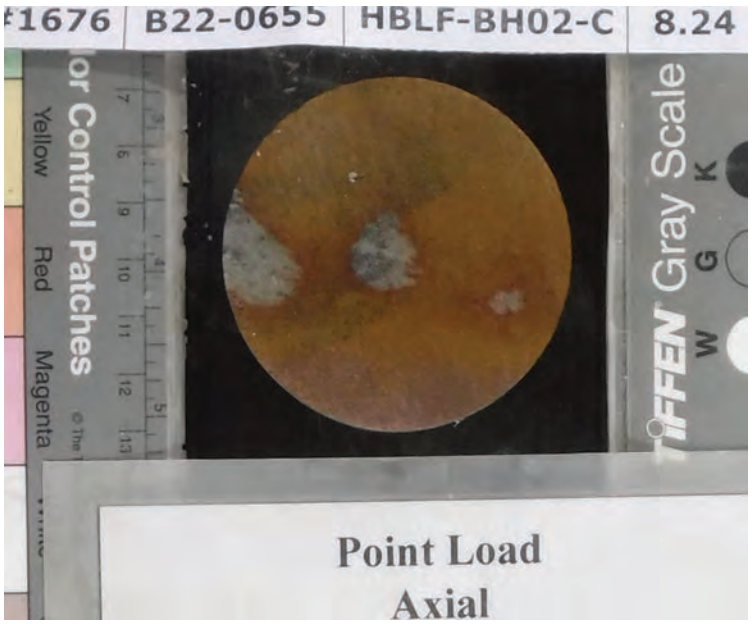
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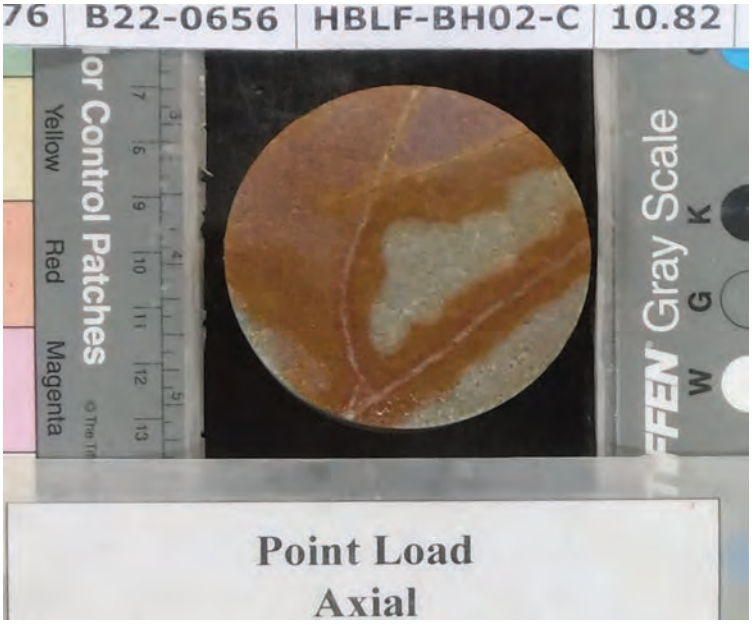
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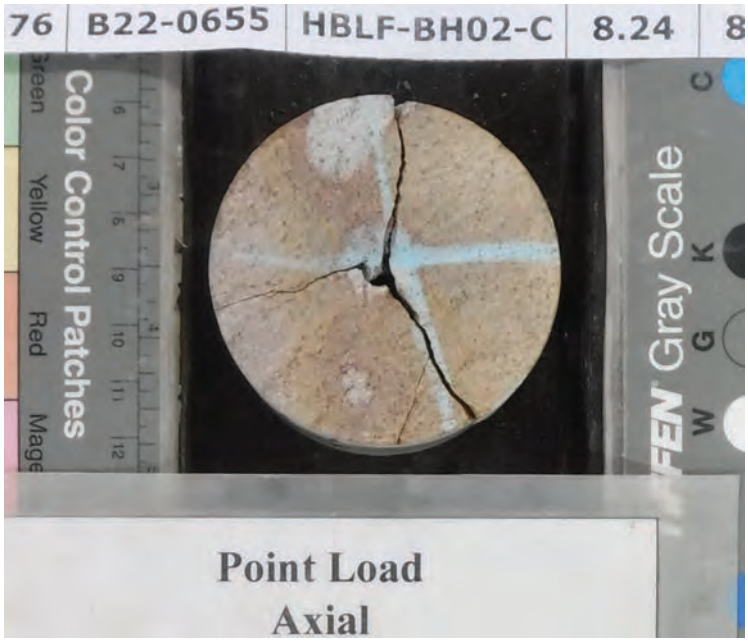
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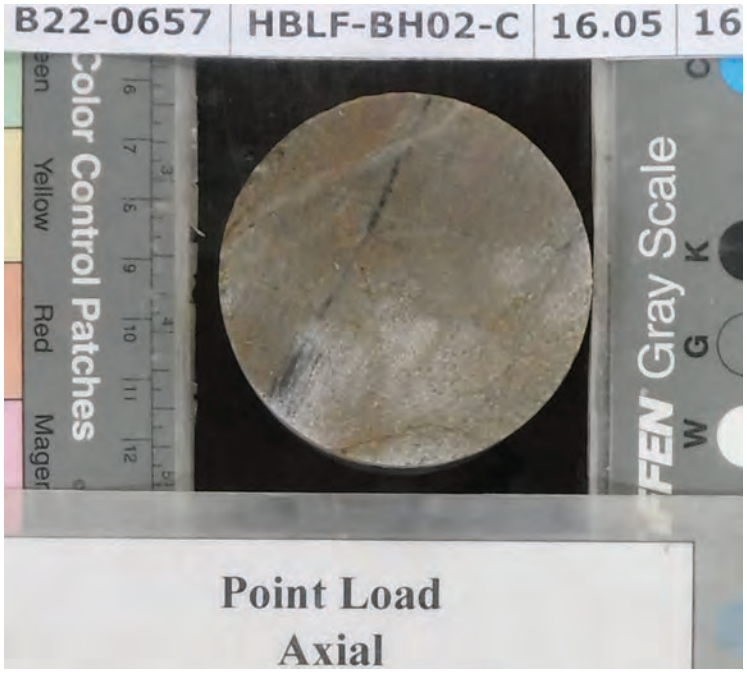
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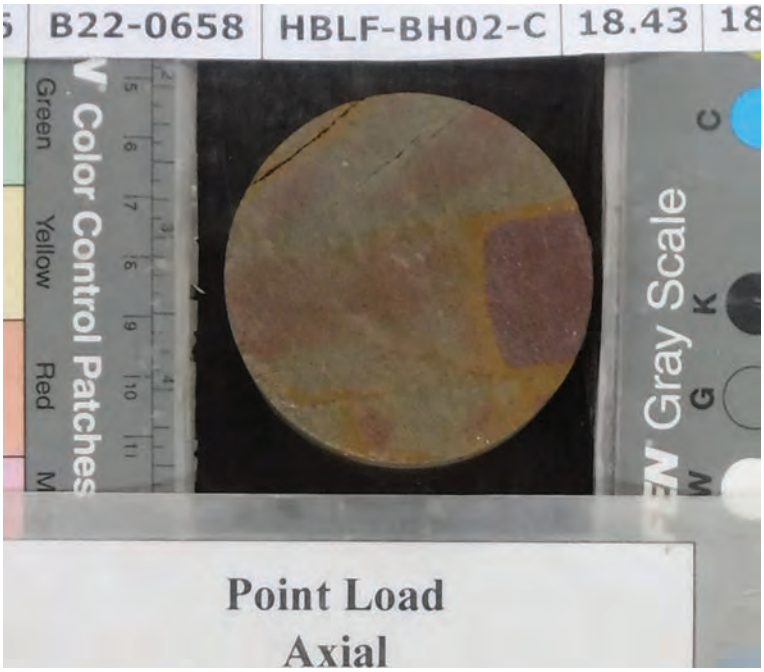
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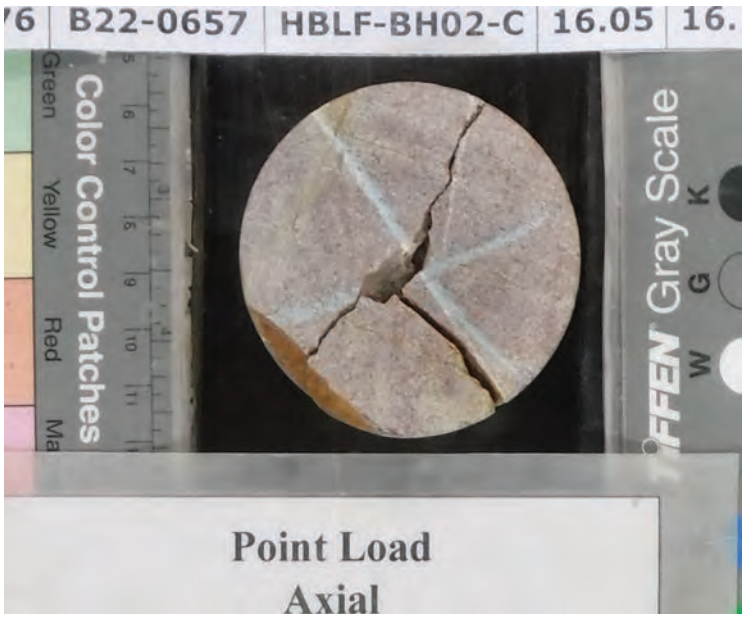
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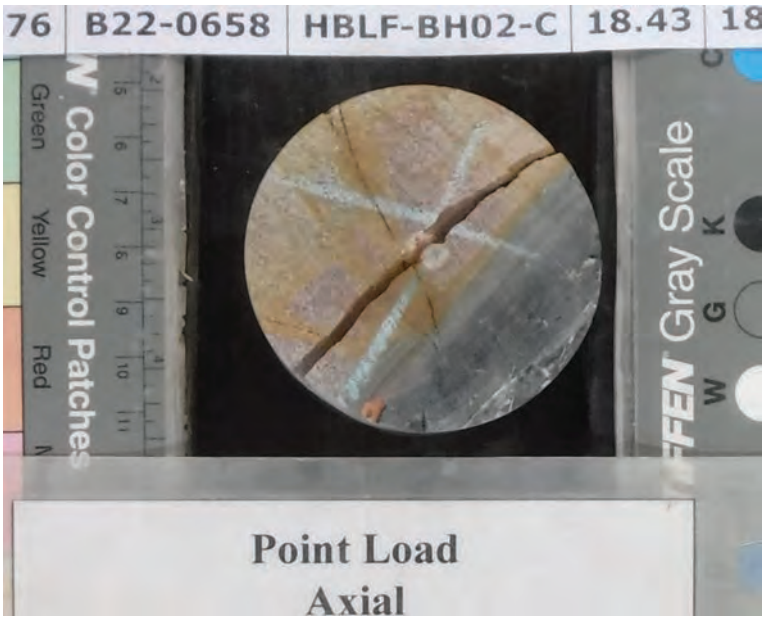
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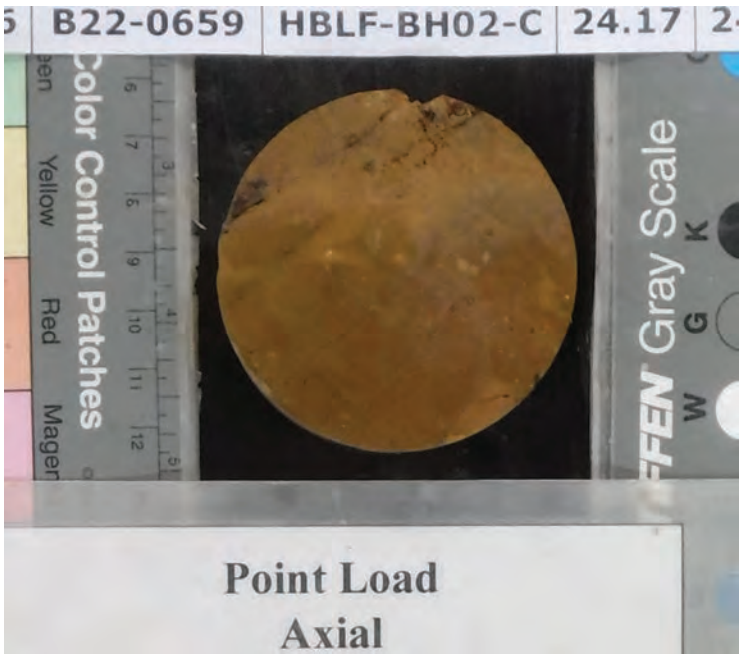
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HBLF-BH02-C
24.17
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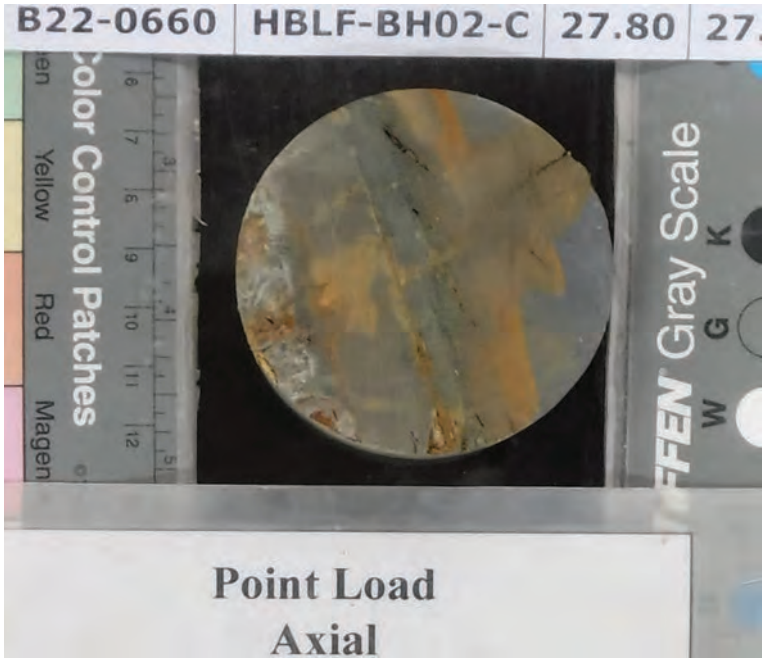
Gray Scale
Point Load
Axial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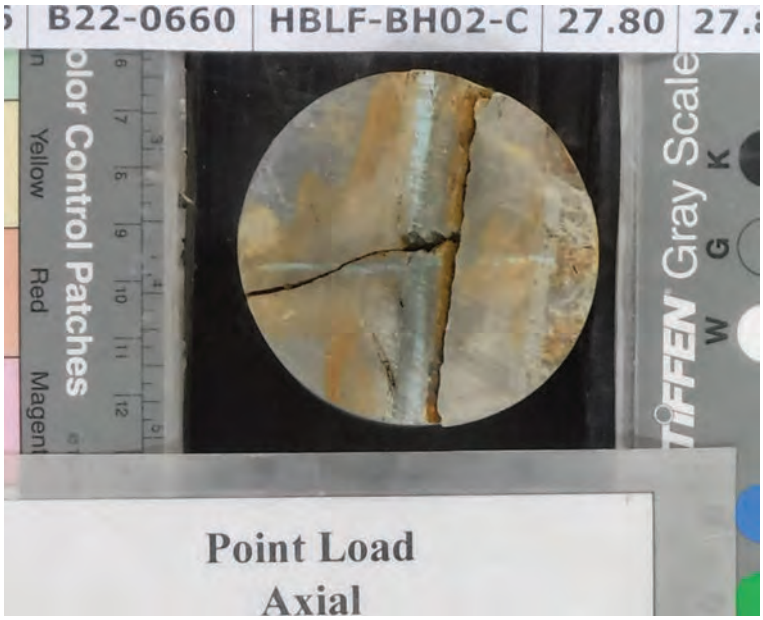
HBLF-BH02-C
27.80
Color Control Patches
Gray Scale
Point Load
Axial

B22-0659
HBLF-BH02-C
24.17
Color Control Patches
Gray Scale
Point Load
Axial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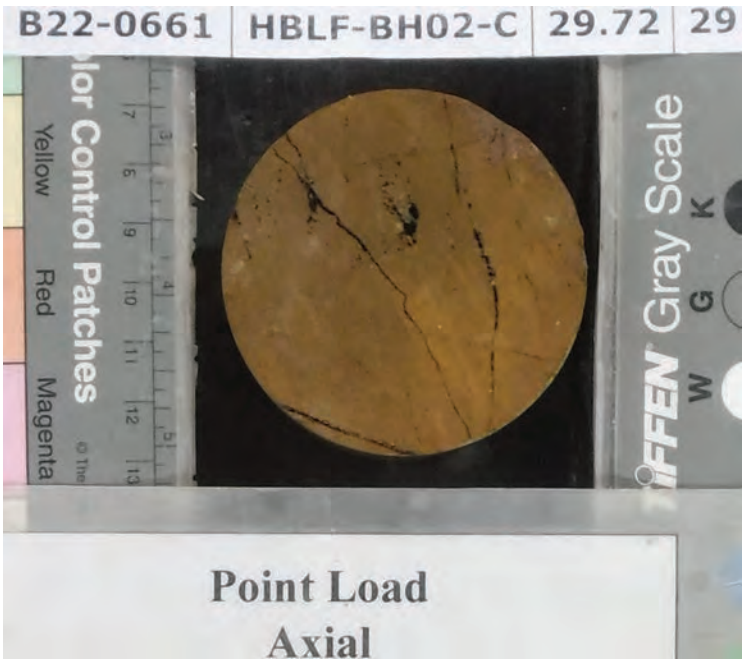
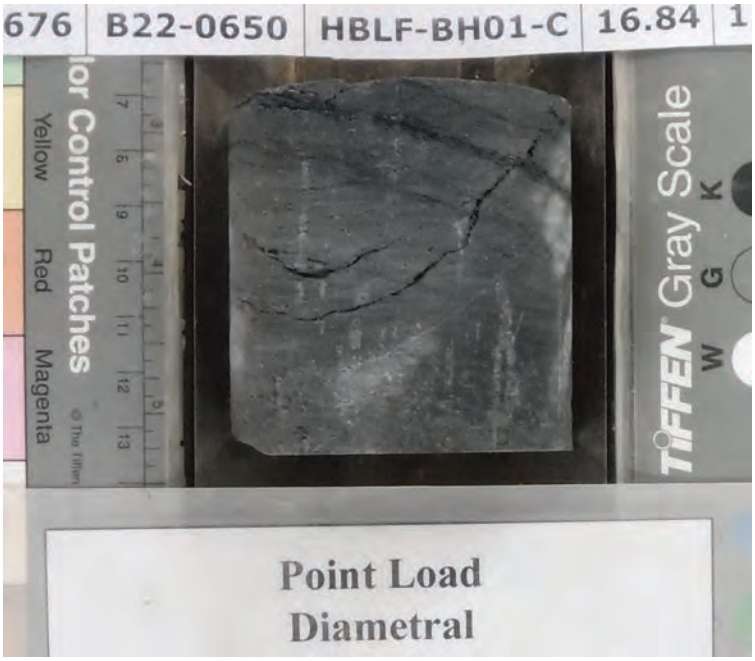
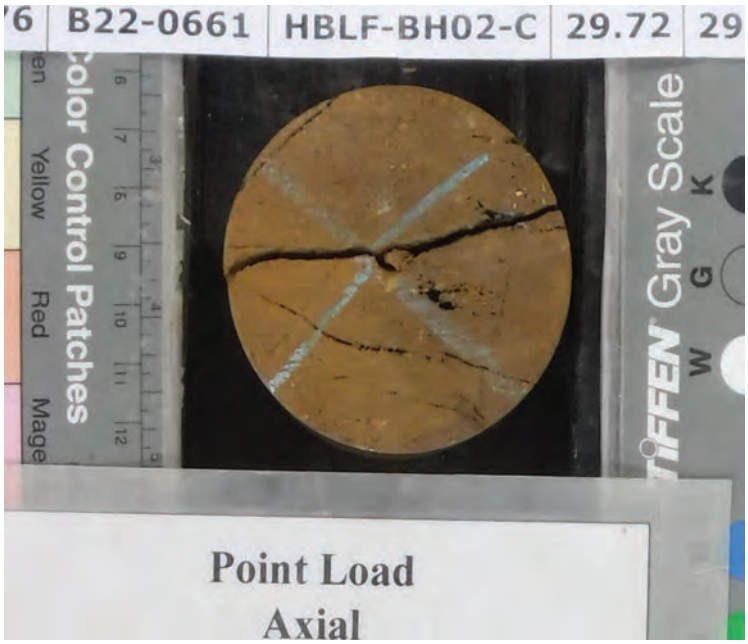
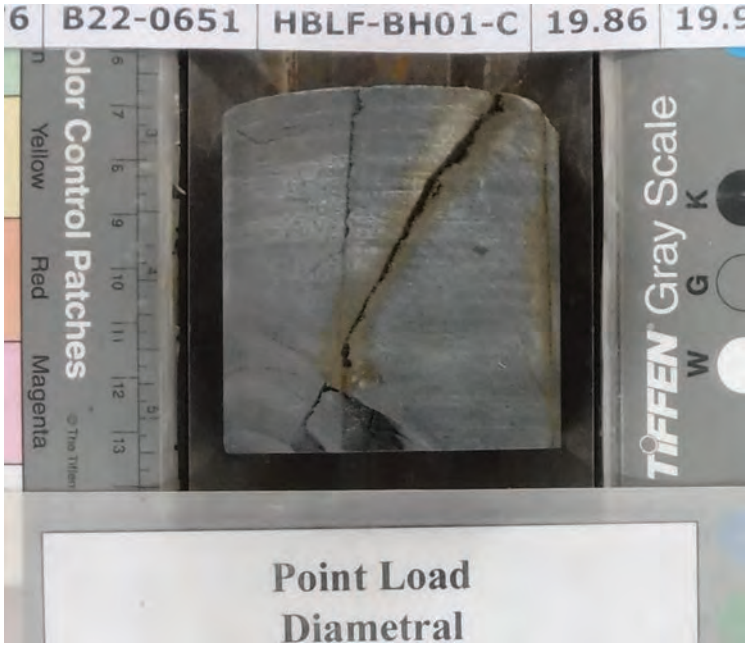

B22-0661 HBLF-BH02-C 29.72 29
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
W G K
Point Load
Axial


676 B22-0650 HBLF-BH01-C 16.84 1
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
W G K
Point Load
Diametral


76 B22-0661 HBLF-BH02-C 29.72 29
Color Control Patches
Yellow
Red
TIFFEN Gray Scale
W G K
Point Load
Axial

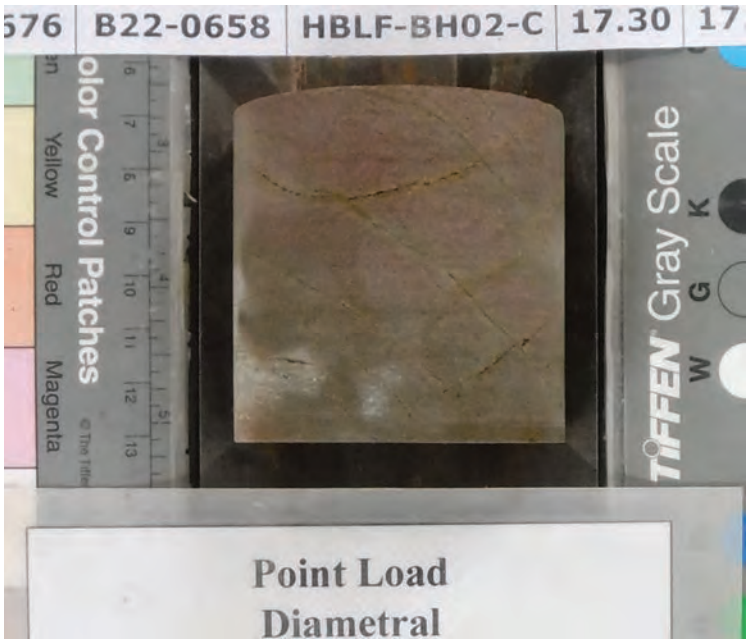
76 B22-0650 HBLF-BH01-C 16.84
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
W G K
Point Load
Diametral


6 B22-0651 HBLF-BH01-C 19.86 19.9
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

676 B22-0652 HBLF-BH01-C 25.77 25
TIFFEN Color Control Patches
Cyan
Green
Yellow
Red
Magenta
White
TIFFEN Gray Scale
Point Load
Irreguar

76 B22-0651 HBLF-BH01-C 19.86 19.9
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

1676 B22-0652 HBLF-BH01-C 25.77
TIFFEN Color Control Patches
Cyan
Green
Yellow
Red
Magenta
White
TIFFEN Gray Scale
Point Load
Irreguar


576 B22-0658 HBLF-BH02-C 17.30 17
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

6 B22-0660 HBLF-BH02-C 28.68 28.7
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

76 B22-0658 HBLF-BH02-C 17.30 17.
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

76 B22-0660 HBLF-BH02-C 28.68 28.7
Color Control Patches
Green
Yellow
Red
Magenta
TIFFEN Gray Scale
Point Load
Diametral

239 ARDEN STREET, NORTH MELBOURNE, 3051 AUSTRALIA
NATA Accredited Facility No. 19523

Test Request No. : 1676
Date Received: 3 March 2022
Client: Jacobs
Project: Heybridge Landfall
Location: Heybridge, TAS
Reference: IS360318-002

CERCHAR Abrasiveness Index Test
(ASTM D7625-10)

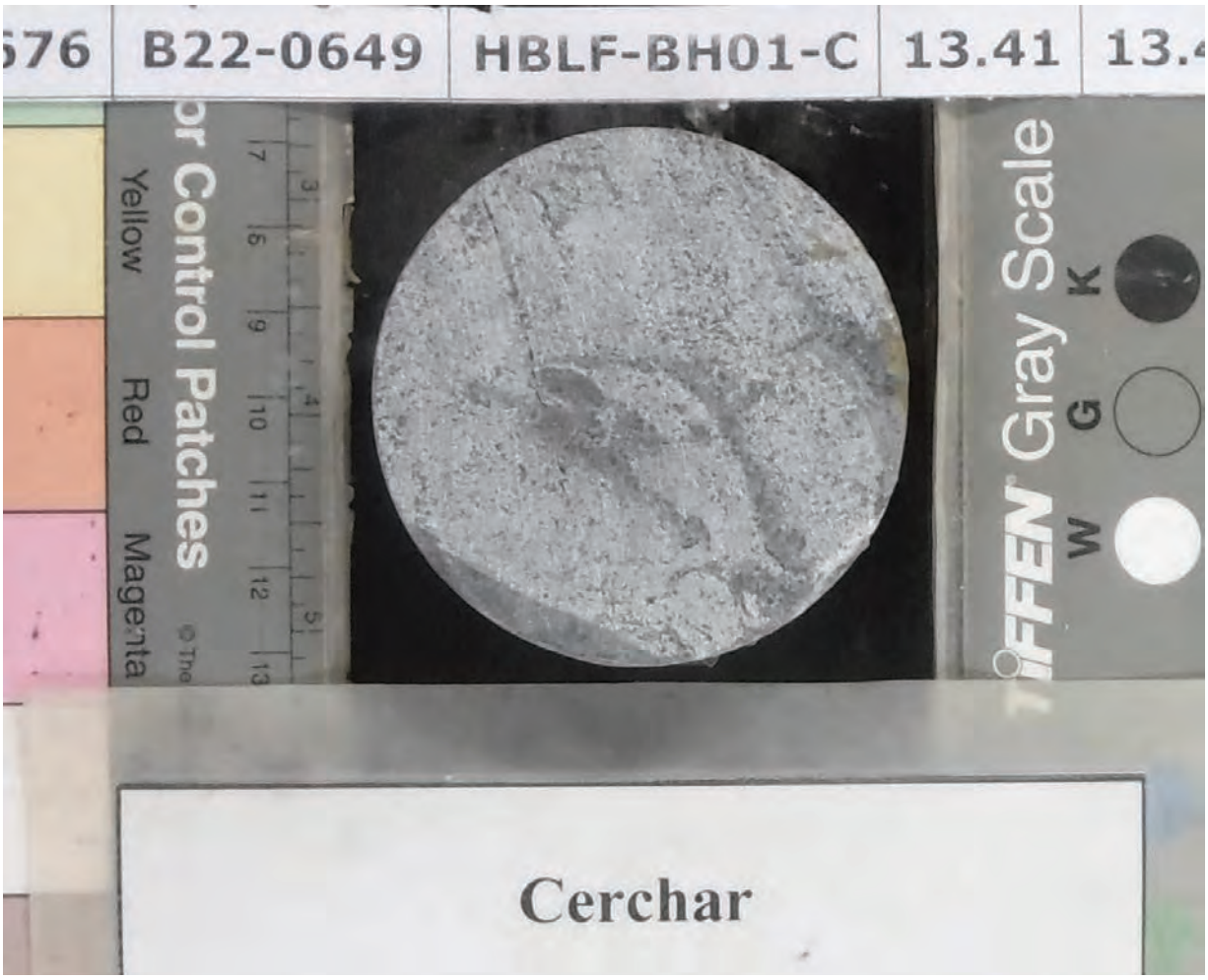
BRTS Sample Number	Sample Location	Lithology	Borehole	Depth from (m)	Depth to (m)	**CERCHAR Abrasivity Index (CAI)**	*Sandvik Mining Test Classification of CAI (2007)*	*ASTM D7625-10 Classification of CAI (2010)*	*Mohs Hardness (Approximate)*
B22-0649	HL	Quartzwacke	HBLF-BH01-C	13.41	13.46	**5.5 ± 0.2**	*Extremely Abrasive*	*Extreme Abrasiveness*	*5.5*
B22-0652	HL	Quartzwacke	HBLF-BH01-C	25.97	26.02	**1.0 ± 0.1**	*Moderately Abrasive*	*Medium Abrasiveness*	*3.8*
B22-0658	HL	Quartzwacke	HBLF-BH02-C	17.60	17.66	**4.8 ± 0.1**	*Extremely Abrasive*	*Extreme Abrasiveness*	*5.4*
B22-0661	HL	Quartzwacke	HBLF-BH02-C	29.77	29.83	**1.9 ± 0.1**	*Abrasive*	*Medium Abrasiveness*	*4.4*

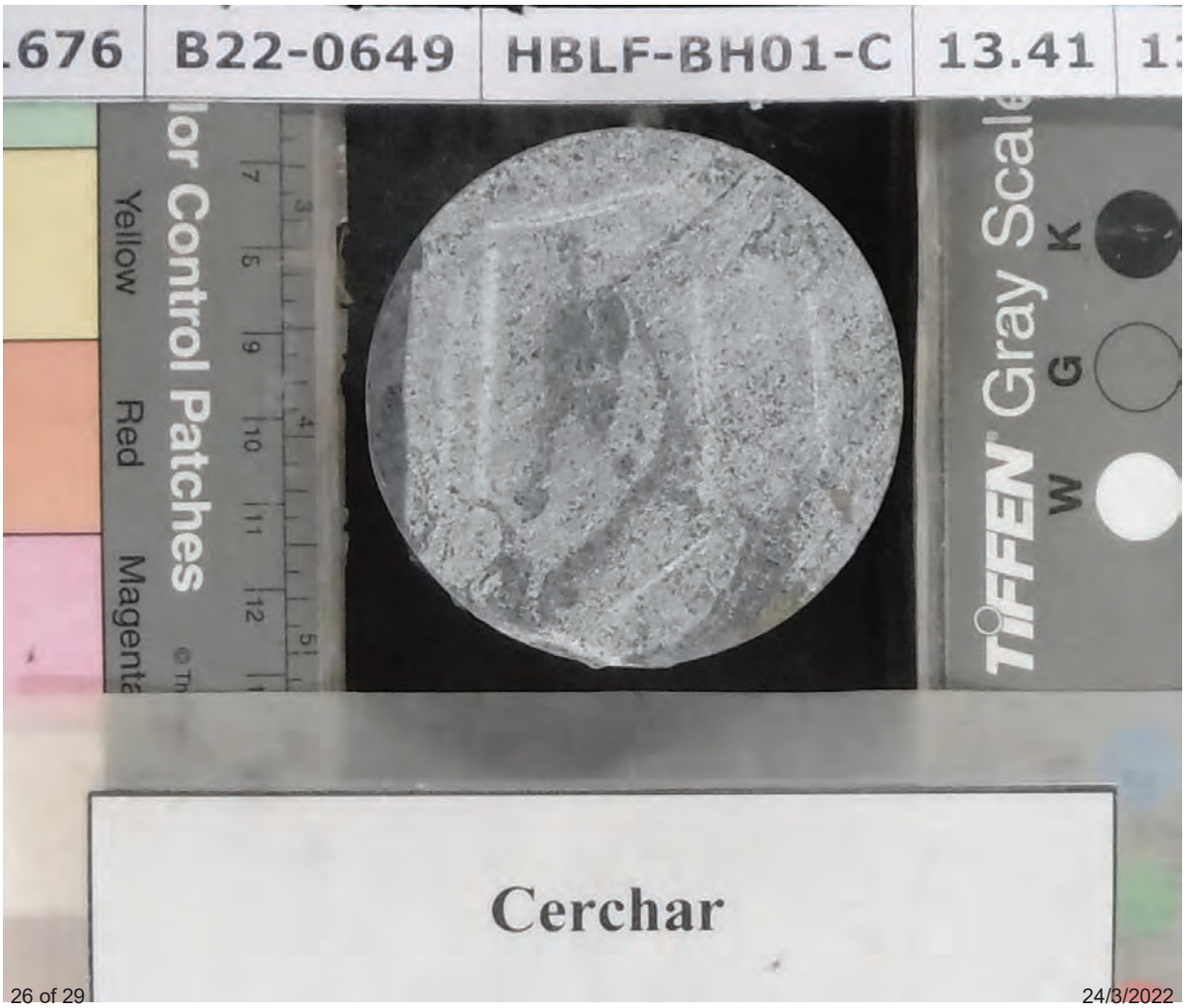
Rockwell Hardness HRC of stylus = 55 ± 1

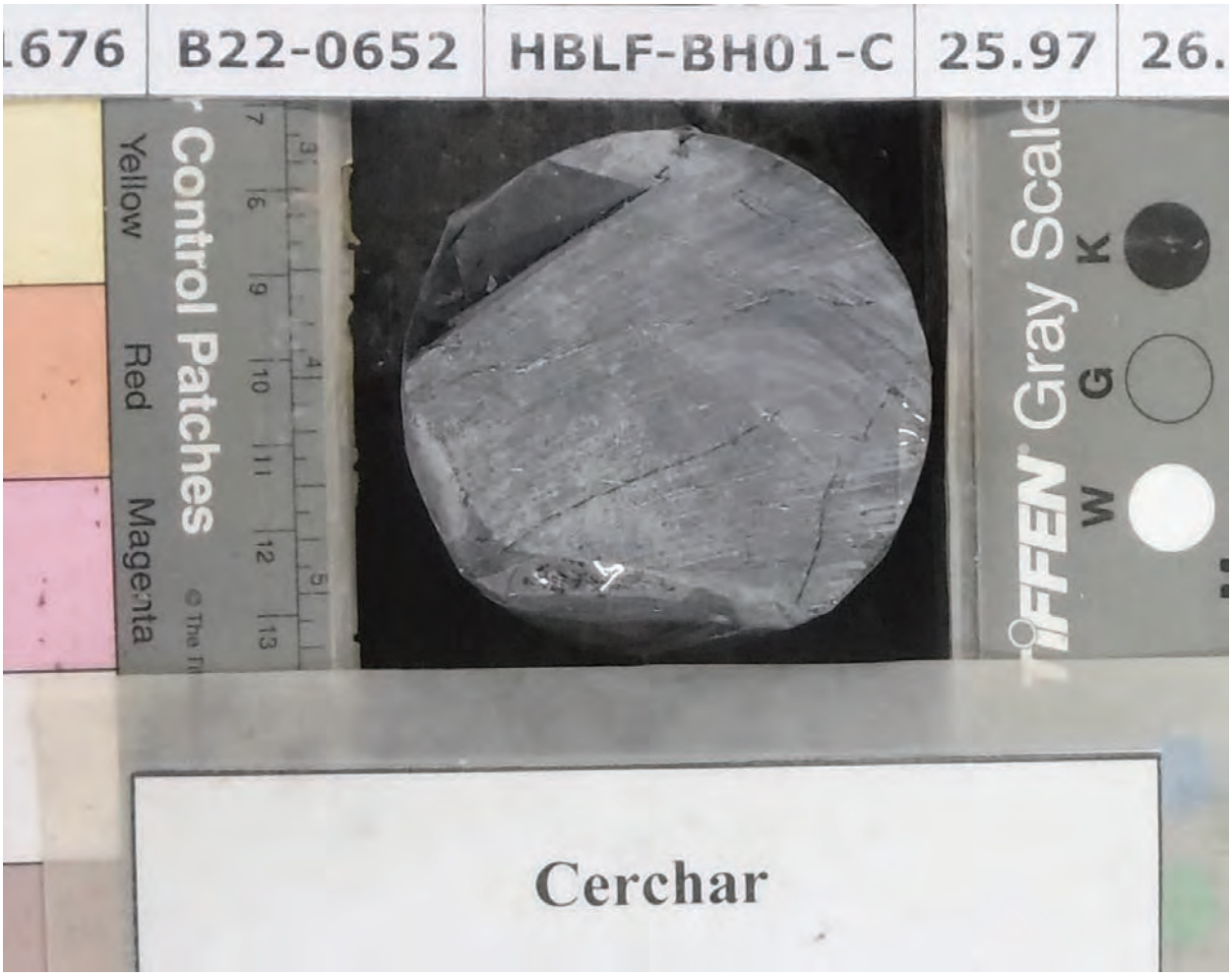
Date tested: 21/03/2022

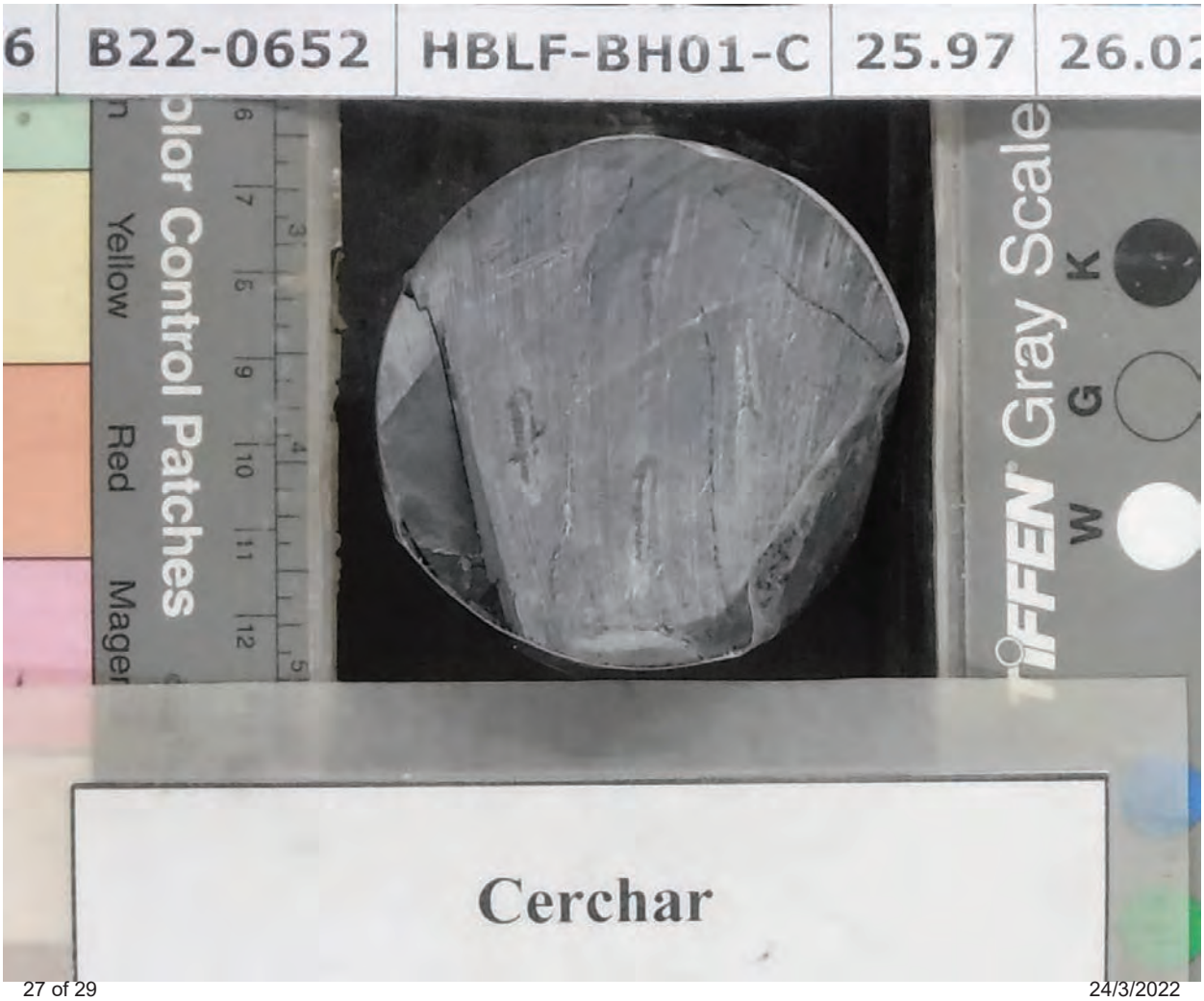
x
Dr W.E. Bamford
Director

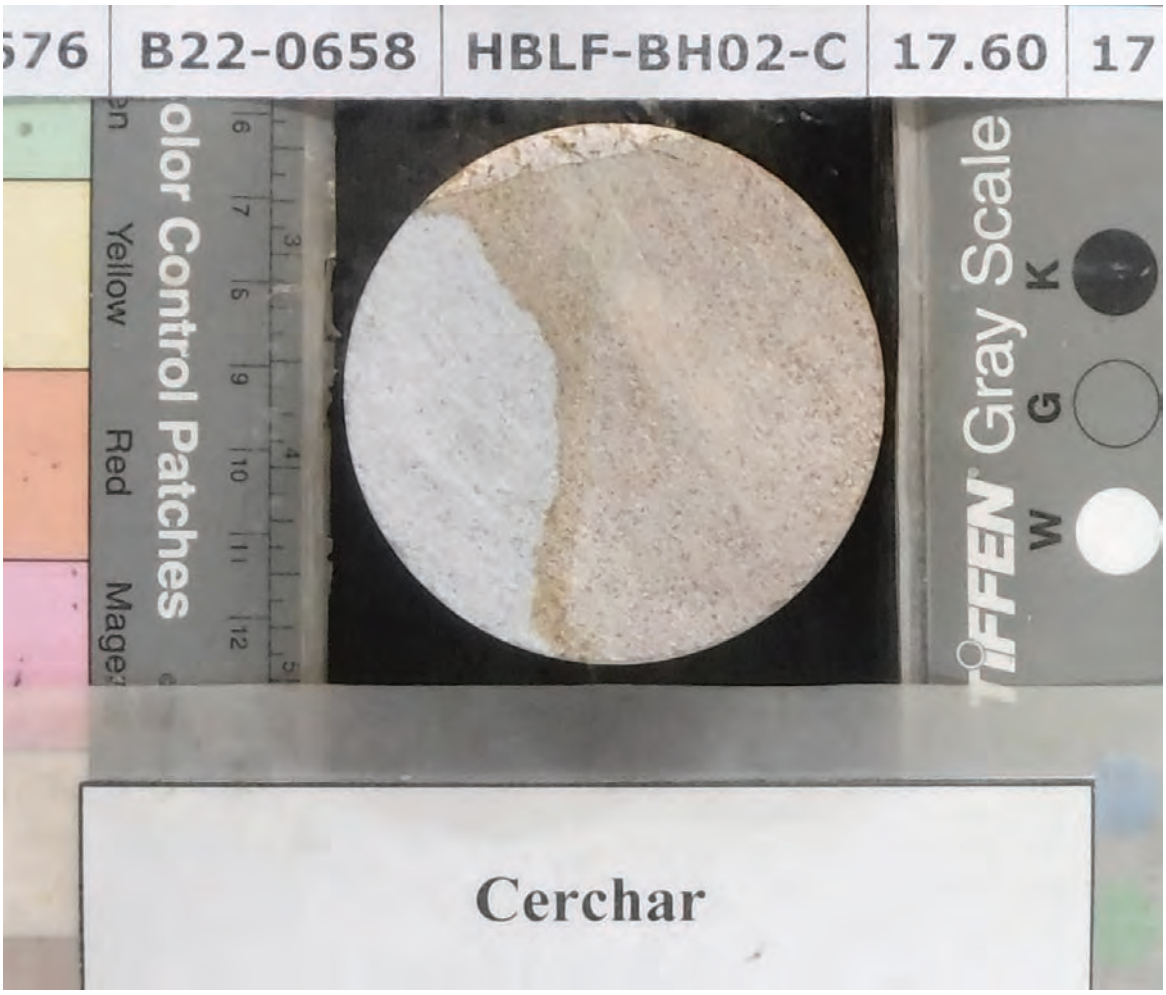
x
Dr D. Palamakumbure
Lab Manager


576
B22-0649
HBLF-BH01-C
13.41
13.4
Yellow
Red
Magenta
TIFFEN Gray Scale
W
G
K
Cerchar

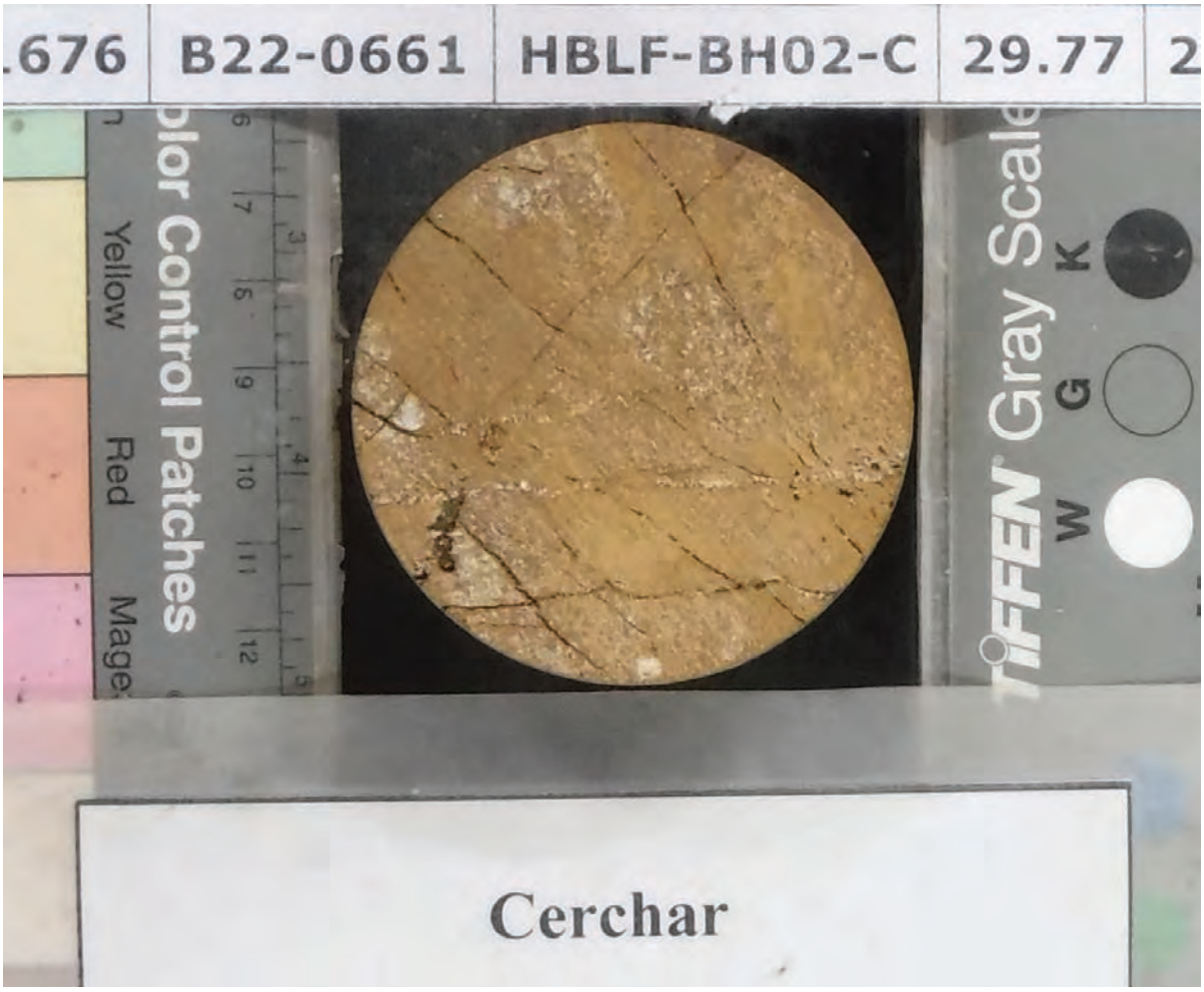

.676
B22-0649
HBLF-BH01-C
13.41
Yellow
Red
TIFFEN Gray Scale
W
G
K
Cerchar

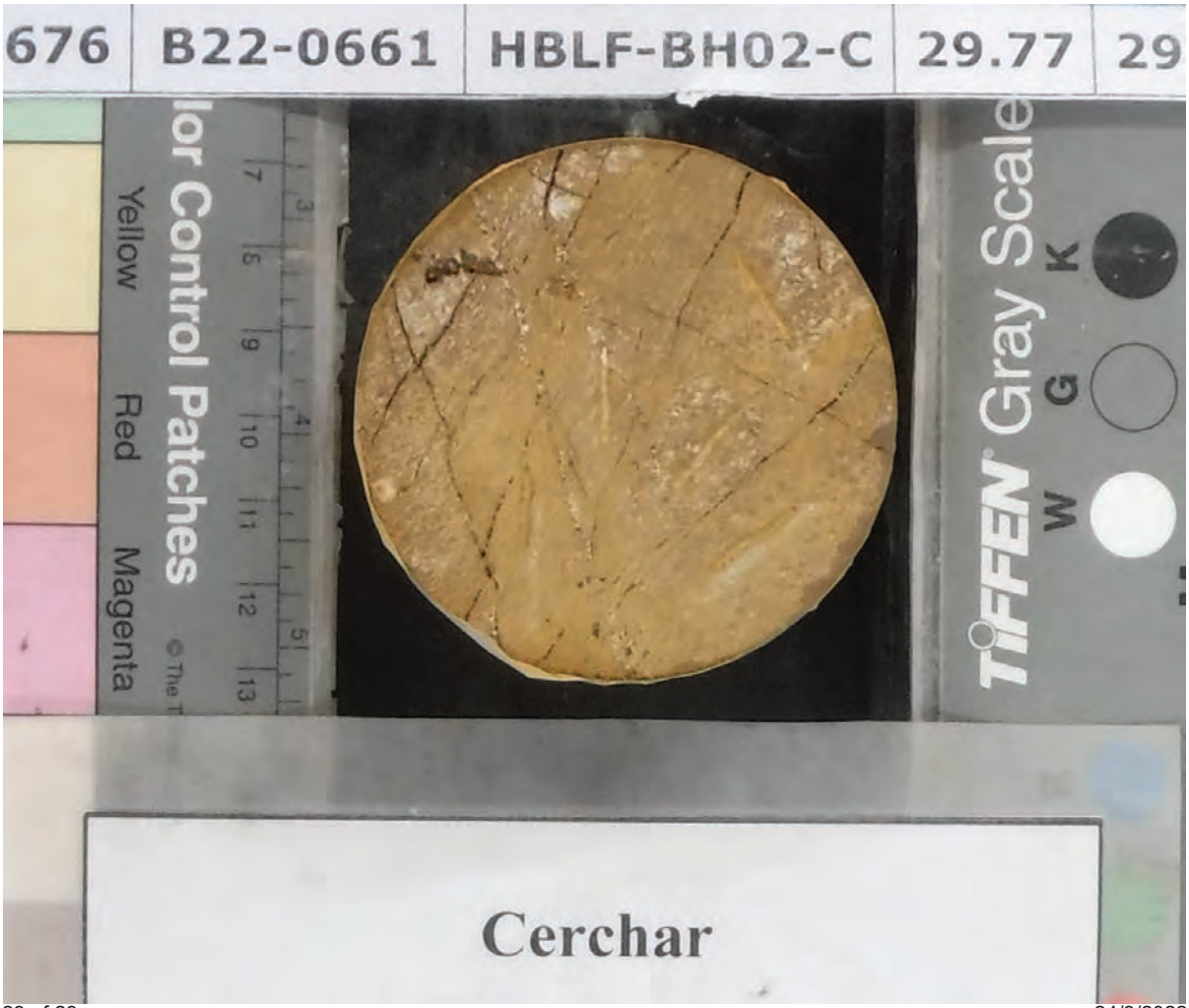

676
B22-0652
HBLF-BH01-C
25.97
26.
Control Patches
Yellow
Red
Magenta
Gray Scale
K
G
W
Cerchar


6
B22-0652
HBLF-BH01-C
25.97
26.0
olor Control Patches
Yellow
Red
Gray Scale
K
G
W
Cerchar


576
B22-0658
HBLF-BH02-C
17.60
17
Color Control Patches
Yellow
Red
TIFFEN Gray Scale
K
G
W
Cerchar

76
B22-0658
HBLF-BH02-C
17.60
17.6
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
K
G
W
Cerchar


.676 B22-0661 HBLF-BH02-C 29.77 2
Color Control Patches
Yellow
Red
Mage
TIFFEN Gray Scale
W G K
Cerchar


676 B22-0661 HBLF-BH02-C 29.77 29
Color Control Patches
Yellow
Red
Magenta
TIFFEN Gray Scale
W G K
Cerchar

Appendix F. Contaminated Land Data Tables

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																				BH04	BH04	BH04	BH04
Depth																				0.1	1	1.5	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Metals																									
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			<5	-	<5	<5
Arsenic (filtered)	µg/L	100			500[#1]																	-	-	-	-
Barium	mg/kg	10		300		30,000																<10	-	<10	20
Barium (filtered)	µg/L	100			35,000[#1]																	-	-	-	-
Beryllium	mg/kg	1		2		400								500								<1	-	<1	<1
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	-	-	-
Boron	mg/kg	50												300,000								<50	-	<50	<50
Boron (filtered)	µg/L	100																				-	-	-	-
Cadmium	mg/kg	1		3		400								900								<1	-	<1	<1
Cadmium (filtered)	µg/L	50			100[#1]																	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																11	-	6	12
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000								<2	-	<2	4
Cobalt (filtered)	µg/L	100			[#2]																	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			9	-	7	10
Copper (filtered)	µg/L	100			10,000[#1]																	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			9	-	12	46
Lead (filtered)	µg/L	100			500[#1]																	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000								46	-	22	109
Manganese (filtered)	µg/L	100			25,000[#1]																	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								0.1	-	<0.1	<0.1
Mercury (filtered)	µg/L	1			10[#1]																	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			4	-	2	19
Nickel (filtered)	µg/L	100			1,000[#1]																	-	-	-	-
Selenium	mg/kg	5		10		200								10,000								<5	-	<5	<5
Selenium (filtered)	µg/L	50			100[#1]																	-	-	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	-
Titanium	mg/kg	10																				320	-	170	1,190
Titanium (filtered)	µg/L	100																				-	-	-	-
Vanadium	mg/kg	5																				8	-	6	11
Vanadium (filtered)	µg/L	100																				-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			10	-	13	58
Zinc (filtered)	µg/L	100			25,000[#1]																	-	-	-	-
Inorganics																									
Chloride	mg/kg	10																				-	-	-	30
Cyanide Total	mg/kg	1		32		2,500																-	-	<1	<1
	mg/L	0.004			1[#1]																	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																				-	-	-	204
Silica (filtered)	mg/kg	1																				-	-	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				-	-	-	290
Sulphur as S (filtered)	mg/kg	10																				-	-	-	-
Resistivity (Saturated Paste)																									
Resistivity	OHM.M	0.01																				-	-	-	49
Physiochemical parameters																									
pH of Leaching Fluid	pH Units	0.1																				-	-	-	-
Moisture Content	%	0.1																				4.6	-	10.3	23.9
pH (Lab)	pH Units	0.1																				-	-	-	7.4
pH (Final)	pH Units	0.1																				-	-	-	-
pH (Initial)	pH Units	0.1																				-	-	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	-
pH (after HCL)	pH Units	0.1																				-	-	-	-
TRH - NEPM 2013 Fractions																									
TRH >C6 - C10	mg/kg	10								[#4]			26,000									<10	-	<10	<10
TRH >C10 - C16	mg/kg	50								[#4]			20,000									<50	-	<50	<50
TRH >C16 - C34	mg/kg	100											27,000							1,700	3,500	<100	-	<100	<100
TRH >C34 - C40	mg/kg	100											38,000							3,300	10,000	<100	-	<100	<100
TRH >C10 - C40 (Sum of total)	mg/kg	50																				<50	-	<50	<50
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	<10	-	<10	<10
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	<50	-	<50	<50

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																				BH04	BH04	BH04	BH04
Depth																				0.1	1	1.5	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
TPH - NEPM 1999 Fractions																									
TPH C6 - C9	mg/kg	10		65		1,000																<10	-	<10	<10
TPH C10 - C14	mg/kg	50																				<50	-	<50	<50
TPH C15 - C28	mg/kg	100																				<100	-	<100	<100
TPH C29-C36	mg/kg	100																				<100	-	<100	<100
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000																<50	-	<50	<50
Polycyclic aromatic hydrocarbons (PAHs)																									
2-chloronaphthalene	mg/kg	0.5																				-	-	<0.5	<0.5
2-methylnaphthalene	mg/kg	0.5																				-	-	<0.5	<0.5
3-methylcholanthrene	mg/kg	0.5																				-	-	<0.5	<0.5
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																				-	-	<0.5	<0.5
Acenaphthene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Acenaphthylene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Acetophenone	mg/kg	0.5																				-	-	<0.5	<0.5
Anthracene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Benz(a)anthracene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																				-	-	<1	<1
Benzo(k)fluoranthene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20															1.4[#16]		<0.5	-	<0.5	<0.5
	µg/L	0.5			0.5[#1]																		-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																				0.6	-	0.6	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	0.5																				-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																				1.2	-	1.2	1.2
Carbazole	mg/kg	0.5																				-	-	<0.5	<0.5
Chrysene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Fluoranthene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Fluorene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Phenanthrene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Pyrene	mg/kg	0.5																				<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]			<0.5	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]								<0.5	-	<0.5	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																	-	-	-	-

Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																						BH04	BH04	BH04	BH04
Depth																						0.1	1	1.5	2
Date																						31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Monocyclic Aromatic Hydrocarbons (MAHs)																									
1,2,4-trimethylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
1,3,5-trimethylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
Isopropylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
n-butylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
n-propylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
p-isopropyltoluene	mg/kg	0.5																				-	-	<0.5	<0.5
sec-butylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
tert-butylbenzene	mg/kg	0.5																				-	-	<0.5	<0.5
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75		<0.2	-	<0.2	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135		<0.5	-	<0.5	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165		<0.5	-	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5																				<0.5	-	<0.5	<0.5
Xylene (o)	mg/kg	0.5																				<0.5	-	<0.5	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180		<0.5	-	<0.5	<0.5
Total BTEX	mg/kg	0.2																				<0.2	-	<0.2	<0.2
Chlorinated Hydrocarbons																									
1,1,1,2-tetrachloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
1,1,1-trichloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
1,1,2,2-tetrachloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
1,1,2-trichloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
1,1-dichloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
1,1-dichloroethene	mg/kg	0.5																				-	-	<0.5	<0.5
1,2,3-trichloropropane	mg/kg	0.5																				-	-	<0.5	<0.5
1,2-dibromo-3-chloropropane	mg/kg	0.5																				-	-	<0.5	<0.5
1,2-dichloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
1,2-dichloropropane	mg/kg	0.5																				-	-	<0.5	<0.5
1,3-dichloropropane	mg/kg	0.5																				-	-	<0.5	<0.5
2,2-dichloropropane	mg/kg	0.5																				-	-	<0.5	<0.5
Bromodichloromethane	mg/kg	0.5																				-	-	<0.5	<0.5
Bromoform	mg/kg	0.5																				-	-	<0.5	<0.5
Carbon tetrachloride	mg/kg	0.5																				-	-	<0.5	<0.5
Chlorodibromomethane	mg/kg	0.5																				-	-	<0.5	<0.5
Chloroethane	mg/kg	5																				-	-	<5	<5
Chloroform	mg/kg	0.5																				-	-	<0.5	<0.5
Chloromethane	mg/kg	5																				-	-	<5	<5
cis-1,2-dichloroethene	mg/kg	0.5																				-	-	<0.5	<0.5
cis-1,3-dichloropropene	mg/kg	0.5																				-	-	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.5																				-	-	<0.5	<0.5
trans-1,3-dichloropropene	mg/kg	0.5																				-	-	<0.5	<0.5
Dibromomethane	mg/kg	0.5																				-	-	<0.5	<0.5
Hexachlorobutadiene	mg/kg	0.5																				-	-	<0.5	<0.5
Hexachlorocyclopentadiene	mg/kg	2.5																				-	-	<2.5	<2.5
Hexachloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
Trichloroethene (TCE)	mg/kg	0.5																				-	-	<0.5	<0.5
Tetrachloroethene (PCE)	mg/kg	0.5																				-	-	<0.5	<0.5
Vinyl chloride	mg/kg	5																				-	-	<5	<5
Halogenated Benzenes																									
1,2,3-trichlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
1,2,4-trichlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
1,2-dichlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
1,3-dichlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
1,4-dichlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
2-chlorotoluene	mg/kg	0.5																				-	-	<0.5	<0.5
4-chlorotoluene	mg/kg	0.5																				-	-	<0.5	<0.5
Bromobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
Chlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
Hexachlorobenzene	mg/kg	0.05												80								-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Pentachlorobenzene	mg/kg	0.5																				-	-	<0.5	<0.5

Lab Report Number																					EM2202101	EM2202101	EM2202101	EM2202101
Field ID																					HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																					BH04	BH04	BH04	BH04
Depth																					0.1	1	1.5	2
Date																					31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Halogenated Hydrocarbons																									
1,2-dibromoethane	mg/kg	0.5																				-	-	<0.5	<0.5
Bromomethane	mg/kg	5																				-	-	<5	<5
Dichlorodifluoromethane	mg/kg	5																				-	-	<5	<5
Iodomethane	mg/kg	0.5																				-	-	<0.5	<0.5
Trichlorofluoromethane	mg/kg	5																				-	-	<5	<5
Solvents																									
Methyl Ethyl Ketone	mg/kg	5																				-	-	<5	<5
2-hexanone (MBK)	mg/kg	5																				-	-	<5	<5
4-Methyl-2-pentanone	mg/kg	5																				-	-	<5	<5
Carbon disulfide	mg/kg	0.5																				-	-	<0.5	<0.5
Isophorone	mg/kg	0.5																				-	-	<0.5	<0.5
Vinyl acetate	mg/kg	5																				-	-	<5	<5
Volatile Organic Compounds (VOCs)																									
1,1-dichloropropene	mg/kg	0.5																				-	-	<0.5	<0.5
cis-1,4-Dichloro-2-butene	mg/kg	0.5																				-	-	<0.5	<0.5
Pentachloroethane	mg/kg	0.5																				-	-	<0.5	<0.5
Styrene	mg/kg	0.5																				-	-	<0.5	<0.5
trans-1,4-Dichloro-2-butene	mg/kg	0.5																				-	-	<0.5	<0.5
Semi Volatile Organic Compounds (SVOCs)																									
2-(acetylamino) fluorene	mg/kg	0.5																				-	-	<0.5	<0.5
3,3-Dichlorobenzidine	mg/kg	0.5																				-	-	<0.5	<0.5
4-(dimethylamino) azobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
4-bromophenyl phenyl ether	mg/kg	0.5																				-	-	<0.5	<0.5
4-chlorophenyl phenyl ether	mg/kg	0.5																				-	-	<0.5	<0.5
4-Nitroquinoline-N-oxide	mg/kg	0.5																				-	-	<0.5	<0.5
Azobenzene	mg/kg	1																				-	-	<1	<1
Bis(2-chloroethoxy) methane	mg/kg	0.5																				-	-	<0.5	<0.5
Bis(2-chloroethyl)ether	mg/kg	0.5																				-	-	<0.5	<0.5
Dibenzofuran	mg/kg	0.5																				-	-	<0.5	<0.5
Hexachloropropene	mg/kg	0.5																				-	-	<0.5	<0.5
Methapyrilene	mg/kg	0.5																				-	-	<0.5	<0.5
N-nitrosomorpholine	mg/kg	0.5																				-	-	<0.5	<0.5
N-nitrosopiperidine	mg/kg	0.5																				-	-	<0.5	<0.5
N-nitrosopyrrolidine	mg/kg	1																				-	-	<1.0	<1.0
Phenacetin	mg/kg	0.5																				-	-	<0.5	<0.5
Per- and Poly-fluoroalkyl Substances (PFAS)																									
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01													-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10														-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																				-	-	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																				-	-	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																				-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																				-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																				-	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																				-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																				-	-	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																				-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																				-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																				-	-	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																				-	-	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																				-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																				-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																				-	-	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																				-	-	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																				-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																				BH04	BH04	BH04	BH04
Depth																				0.1	1	1.5	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																				-	-	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																				-	-	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																				-	-	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																				-	-	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																				-	-	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																				-	-	-	-
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																				-	-	-	-
Sum (PFHxS + PFOS)	mg/kg	0.0002					20															-	-	-	-
Sum of PFAS	µg/kg	0.2																				-	-	-	-
(n:2) Fluorotelomer Sulfonic Acids																									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																				-	-	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																				-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																				-	-	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																				-	-	-	-
Phenols																									
2,4,5-trichlorophenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2-chlorophenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2-methylphenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
2-nitrophenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	1																				-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																				-	-	<0.5	<0.5
	µg/L	2																				-	-	-	-
Pentachlorophenol	mg/kg	1													660							-	-	<1	<1
	µg/L	2																				-	-	-	-
Phenol	mg/kg	0.5													240,000							-	-	<0.5	<0.5
Phenol	µg/L	1																				-	-	-	-
Phthalates																									
Bis(2-ethylhexyl) phthalate	mg/kg	5																				-	-	<5.0	<5.0
Butyl benzyl phthalate	mg/kg	0.5																				-	-	<0.5	<0.5
Diethylphthalate	mg/kg	0.5																				-	-	<0.5	<0.5
Dimethyl phthalate	mg/kg	0.5																				-	-	<0.5	<0.5
Di-n-butyl phthalate	mg/kg	0.5																				-	-	<0.5	<0.5
Di-n-octyl phthalate	mg/kg	0.5																				-	-	<0.5	<0.5

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																				BH04	BH04	BH04	BH04
Depth																				0.1	1	1.5	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m				
Organochlorine Pesticides (OCPs)																									
4,4-DDE	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
a-BHC	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Aldrin	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45								-	-	<0.05	<0.05
	µg/L	0.5			3[#1]																	-	-	-	-
b-BHC	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Chlordane	mg/kg	0.05												530								-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Chlordane (cis)	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Chlordane (trans)	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
d-BHC	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
DDD	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
DDT	mg/kg	0.2																		640[#11]		-	-	<0.2	<0.2
	µg/L	2																				-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600								-	-	<0.05	<0.05
	µg/L	0.5			200[#1]																	-	-	-	-
Chlorobenzilate	mg/kg	0.5																				-	-	<0.5	<0.5
Dieldrin	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Endosulfan	mg/kg	0.05												2,000								-	-	<0.05	<0.05
Endosulfan I	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Endosulfan II	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Endosulfan sulfate	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Endrin	mg/kg	0.05												100								-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Endrin aldehyde	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Endrin ketone	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Heptachlor	mg/kg	0.05												50								-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Heptachlor epoxide	mg/kg	0.05																				-	-	<0.05	<0.05
	µg/L	0.5																				-	-	-	-
Methoxychlor	mg/kg	0.2												2,500								-	-	<0.2	<0.2
Methoxychlor	µg/L	2																				-	-	-	-
Organophosphorous Pesticides (OPPs)																									
Chlorfenvinphos	mg/kg	0.5																				-	-	<0.5	<0.5
Chlorpyrifos	mg/kg	0.5												2,000								-	-	<0.5	<0.5
Chlorpyrifos-methyl	mg/kg	0.5																				-	-	<0.5	<0.5
Diazinon	mg/kg	0.5																				-	-	<0.5	<0.5
Dichlorvos	mg/kg	0.5																				-	-	<0.5	<0.5
Dimethoate	mg/kg	0.5																				-	-	<0.5	<0.5
Ethion	mg/kg	0.5																				-	-	<0.5	<0.5
Fenthion	mg/kg	0.5																				-	-	<0.5	<0.5
Malathion	mg/kg	0.5																				-	-	<0.5	<0.5
Pirimphos-ethyl	mg/kg	0.5																				-	-	<0.5	<0.5
Prothiofos	mg/kg	0.5																				-	-	<0.5	<0.5

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Field ID																				HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																				BH04	BH04	BH04	BH04
Depth																				0.1	1	1.5	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m				
Polychlorinated Biphenyls (PCBs)																							
PCBs (Sum of total)	mg/kg	0.1												7[#9]								-	-	<0.1	<0.1
PCBs (Sum of total)	µg/L	1																				-	-	-	-
Herbicides																									
Pronamide	mg/kg	0.5																				-	-	<0.5	<0.5
Amino Aliphatics																									
N-nitrosodiethylamine	mg/kg	0.5																				-	-	<0.5	<0.5
N-nitrosodi-n-butylamine	mg/kg	0.5																				-	-	<0.5	<0.5
N-nitrosodi-n-propylamine	mg/kg	0.5																				-	-	<0.5	<0.5
N-Nitrosomethylethylamine	mg/kg	0.5																				-	-	<0.5	<0.5
Amino Aromatics																									
1-naphthylamine	mg/kg	0.5																				-	-	<0.5	<0.5
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																				-	-	<1.0	<1.0
Anilines																									
2-nitroaniline	mg/kg	1																				-	-	<1.0	<1.0
3-nitroaniline	mg/kg	1																				-	-	<1.0	<1.0
4-chloroaniline	mg/kg	0.5																				-	-	<0.5	<0.5
4-nitroaniline	mg/kg	0.5																				-	-	<0.5	<0.5
2-methyl-5-nitroaniline	mg/kg	0.5																				-	-	<0.5	<0.5
Aniline	mg/kg	0.5																				-	-	<0.5	<0.5
Nitroaromatics																									
2-Picoline	mg/kg	0.5																				-	-	<0.5	<0.5
4-aminobiphenyl	mg/kg	0.5																				-	-	<0.5	<0.5
Pentachloronitrobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
Explosives																									
1,3,5-Trinitrobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
2,4-Dinitrotoluene	mg/kg	1																				-	-	<1.0	<1.0
2,6-dinitrotoluene	mg/kg	1																				-	-	<1.0	<1.0
Nitrobenzene	mg/kg	0.5																				-	-	<0.5	<0.5
Acid Sulfate Soils - Acid Base Accounting																									
Net Acidity (acidity units)	mole H+/t	10																				-	-	-	<10
Net Acidity (sulfur units)	%S	0.02																				-	-	-	<0.02
Acid Sulfate Soils - Acidity Trail																									
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																					-	-	-	<0.020
Titratable Actual Acidity (sulfur units)	%S	0.02																				-	-	-	<0.020
Titratable Peroxide Acidity (sulfur units)	%S	0.02																				-	-	-	<0.020
Titratable Actual Acidity	mole H+/t	2																				-	-	-	<2
Titratable Sulfidic Acidity	moles H+/t	2																				-	-	-	<2
Acid Sulfate Soils - ANC																									
ANC Fineness Factor	-	0.5																				-	-	-	1.5
Net Acidity excluding ANC (sulfur units)	% S	0.02																				-	-	-	0.04
Acid Sulfate Soils - Calcium Values																									
Acid Reacted Calcium	% Ca	0.02																				-	-	-	0.027
acidity - Acid Reacted Calcium	mole H+/t	10																				-	-	-	13
Calcium in Peroxide	%	0.02																				-	-	-	0.206
KCl Extractable Calcium	%	0.02																				-	-	-	0.180
Acid Sulfate Soils - CRS																									
pH (KCl)	pH units	0.1																				-	-	-	7.4

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Field ID																				HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2
Location Code																				BH04	BH04	BH04	BH04
Depth																				0.1	1	1.5	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m				
Acid Sulfate Soils - Field																							
Reaction Rate	-	1																		-	-	-	3
pH (F)	pH Units	0.1																		-	-	-	7.1
pHFox	pH Units	0.1																		-	-	-	4.7
Acid Sulfate Soils - Liming Rate																							
Liming Rate	kg CaCO3/t	1																		-	-	-	<1
Liming Rate excluding ANC	kg CaCO3/t	1																		-	-	-	2
Acid Sulfate Soils - Magnesium Values																							
Acid Reacted Magnesium	% Mg	0.02																		-	-	-	<0.020
Acid Reacted Magnesium (acidity units)	mole H+/t	10																		-	-	-	<10
KCl Extractable Magnesium	%	0.02																		-	-	-	<0.020
Magnesium in Peroxide	%	0.02																		-	-	-	<0.020
Acid Reacted Magnesium (sulfur units)	%S	0.02																		-	-	-	<0.020
Acid Sulfate Soils - pH																							
pH-OX	pH units	0.1																		-	-	-	5.7
Acid Sulfate Soils - Retained Acidity																							
HCl Extractable Sulfur	%S	0.02																		-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																		-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																		-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																		-	-	-	-
Acid Sulfate Soils - Sulfur Trail																							
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																		-	-	-	22
KCl Extractable Sulfur	%	0.02																		-	-	-	<0.020
Peroxide Oxidisable Sulfur	%	0.02																		-	-	-	0.035
Peroxide Sulfur	%	0.02																		-	-	-	0.035
SPOCAS																							
a-Net Acidity without ANCE_	mole H+/t	10	18																	-	-	-	22
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																		-	-	-	13
Titratable Peroxide Acidity	mole H+/t	2																		-	-	-	<2
Asbestos																							
Organic Fibre	g/kg	0.1																		Yes	No	-	-
Synthetic Mineral Fibre	g/kg	0.1																		No	No	-	-
Approved Identifier	Comment																			U.DALKIN	U.DALKIN	-	-
Sample Weight	g	0.01																		69.7	49.3	-	-
Description	Comment																			1[#20]	1[#22]	-	-
Asbestos fibres	g/kg	0.1																		No	No	-	-
Asbestos (Trace)	Fibres	5																		No	No	-	-
Asbestos Type	Comment																			-	-	-	-

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Field ID																				HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																				BH05	BH05	BH05	BH06	BH06	BH06
Depth																				0.1	0.5	1	0.5	1	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Metals																									
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			-	5	<5	-	23	16
Arsenic (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Barium	mg/kg	10		300		30,000																-	20	<10	-	<10	10
Barium (filtered)	µg/L	100			35,000[#1]																	-	-	-	-	-	-
Beryllium	mg/kg	1		2		400								500								-	<1	<1	-	<1	<1
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	-	-	-	-	-
Boron	mg/kg	50												300,000								-	<50	<50	-	<50	<50
Boron (filtered)	µg/L	100																				-	-	-	-	-	-
Cadmium	mg/kg	1		3		400								900								-	<1	<1	-	<1	<1
Cadmium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																-	9	5	-	3	14
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000								-	6	<2	-	<2	<2
Cobalt (filtered)	µg/L	100			[#2]																	-	-	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			-	26	13	-	<5	<5
Copper (filtered)	µg/L	100			10,000[#1]																	-	-	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			-	95	29	-	<5	<5
Lead (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000								-	234	<5	-	<5	20
Manganese (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								-	<0.1	<0.1	-	<0.1	0.2
Mercury (filtered)	µg/L	1			10[#1]																	-	-	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			-	15	<2	-	<2	2
Nickel (filtered)	µg/L	100			1,000[#1]																	-	-	-	-	-	-
Selenium	mg/kg	5		10		200								10,000								-	<5	<5	-	<5	<5
Selenium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	-	-	-
Titanium	mg/kg	10																				-	260	170	-	40	50
Titanium (filtered)	µg/L	100																				-	-	-	-	-	-
Vanadium	mg/kg	5																				-	7	8	-	15	10
Vanadium (filtered)	µg/L	100																				-	-	-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			-	140	11	-	16	<5
Zinc (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Inorganics																									
Chloride	mg/kg	10																				-	-	<10	-	-	30
Cyanide Total	mg/kg	1		32		2,500																<1	-	-	<1	-	-
	mg/L	0.004			1[#1]																	-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																				-	-	45	-	-	42
Silica (filtered)	mg/kg	1																				-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				-	-	70	-	-	40
Sulphur as S (filtered)	mg/kg	10																				-	-	-	-	-	-
Resistivity (Saturated Paste)																									
Resistivity	OHM.M	0.01																				-	-	222	-	-	238
Physiochemical parameters																									
pH of Leaching Fluid	pH Units	0.1																				-	-	-	-	-	-
Moisture Content	%	0.1																				6.8	8.8	6.8	12.9	9.5	10.3
pH (Lab)	pH Units	0.1																				-	-	5.8	-	-	7.2
pH (Final)	pH Units	0.1																				-	-	-	-	-	-
pH (Initial)	pH Units	0.1																				-	-	-	-	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	-	-	-
pH (after HCL)	pH Units	0.1																				-	-	-	-	-	-
TRH - NEPM 2013 Fractions																									
TRH >C6 - C10	mg/kg	10								[#4]				26,000								-	<10	<10	-	<10	<10
TRH >C10 - C16	mg/kg	50								[#4]				20,000								-	<50	<50	-	<50	<50
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500	-	<100	<100	-	<100	<100
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000	-	<100	<100	-	<100	<100
TRH >C10 - C40 (Sum of total)	mg/kg	50																				-	<50	<50	-	<50	<50
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	-	<10	<10	-	<10	<10
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	-	<50	<50	-	<50	<50

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Field ID																				HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																				BH05	BH05	BH05	BH06	BH06	BH06
Depth																				0.1	0.5	1	0.5	1	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
TPH - NEPM 1999 Fractions																									
TPH C6 - C9	mg/kg	10		65		1,000														-	<10	<10	-	<10	<10
TPH C10 - C14	mg/kg	50																		-	<50	<50	-	<50	<50
TPH C15 - C28	mg/kg	100																		-	<100	<100	-	<100	<100
TPH C29-C36	mg/kg	100																		-	<100	<100	-	<100	<100
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000														-	<50	<50	-	<50	<50
Polycyclic aromatic hydrocarbons (PAHs)																									
2-chloronaphthalene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
2-methylnaphthalene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
3-methylcholanthrene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Acenaphthene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Acenaphthylene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Acetophenone	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Anthracene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																		<1	-	-	<1	-	-
Benzo(k)fluoranthene	mg/kg	0.5																		-	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																		-	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20														<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	0.5			0.5[#1]															-	-	-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																		0.6	0.6	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	0.5																		-	-	-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																		1.2	1.2	1.2	1.2	1.2	1.2
Carbazole	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Chrysene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Fluoranthene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Fluorene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Phenanthrene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Pyrene	mg/kg	0.5																		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	µg/L	1																		-	-	-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]						
	µg/L	1																		-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]															-	-	-	-	-	-

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion									
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
Lab Report Number																							EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																							HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																							BH05	BH05	BH05	BH06	BH06	BH06
Depth																							0.1	0.5	1	0.5	1	2
Date																							31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Monocyclic Aromatic Hydrocarbons (MAHs)																												
1,2,4-trimethylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,3,5-trimethylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Isopropylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
n-butylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
n-propylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
p-isopropyltoluene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
sec-butylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
tert-butylbenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5																					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (o)	mg/kg	0.5																					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180			-	<0.5	<0.5	-	<0.5	<0.5
Total BTEX	mg/kg	0.2																					-	<0.2	<0.2	-	<0.2	<0.2
Chlorinated Hydrocarbons																												
1,1,1,2-tetrachloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,1,1-trichloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,1,2-trichloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,1-dichloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,1-dichloroethene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,2,3-trichloropropane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,2-dichloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,2-dichloropropane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,3-dichloropropane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
2,2-dichloropropane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Bromodichloromethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Bromoform	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Carbon tetrachloride	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Chlorodibromomethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Chloroethane	mg/kg	5																					<5	-	-	<5	-	-
Chloroform	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Chloromethane	mg/kg	5																					<5	-	-	<5	-	-
cis-1,2-dichloroethene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
cis-1,3-dichloropropene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
trans-1,3-dichloropropene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Dibromomethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Hexachlorobutadiene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Hexachlorocyclopentadiene	mg/kg	2.5																					<2.5	-	-	<2.5	-	-
Hexachloroethane	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Trichloroethene (TCE)	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Tetrachloroethene (PCE)	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Vinyl chloride	mg/kg	5																					<5	-	-	<5	-	-
Halogenated Benzenes																												
1,2,3-trichlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,2,4-trichlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,2-dichlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,3-dichlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
1,4-dichlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
2-chlorotoluene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
4-chlorotoluene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Bromobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Chlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Hexachlorobenzene	mg/kg	0.05												80									<0.05	-	-	<0.05	-	-
	µg/L	0.5																					-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																				BH05	BH05	BH05	BH06	BH06	BH06
Depth																				0.1	0.5	1	0.5	1	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Halogenated Hydrocarbons																									
1,2-dibromoethane	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Bromomethane	mg/kg	5																		<5	-	-	<5	-	-
Dichlorodifluoromethane	mg/kg	5																		<5	-	-	<5	-	-
Iodomethane	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Trichlorofluoromethane	mg/kg	5																		<5	-	-	<5	-	-
Solvents																									
Methyl Ethyl Ketone	mg/kg	5																		<5	-	-	<5	-	-
2-hexanone (MBK)	mg/kg	5																		<5	-	-	<5	-	-
4-Methyl-2-pentanone	mg/kg	5																		<5	-	-	<5	-	-
Carbon disulfide	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Isophorone	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Vinyl acetate	mg/kg	5																		<5	-	-	<5	-	-
Volatile Organic Compounds (VOCs)																									
1,1-dichloropropene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Pentachloroethane	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Styrene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Semi Volatile Organic Compounds (SVOCs)																									
2-(acetylamino) fluorene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
3,3-Dichlorobenzidine	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
4-(dimethylamino) azobenzene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
4-bromophenyl phenyl ether	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
4-chlorophenyl phenyl ether	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
4-Nitroquinoline-N-oxide	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Azobenzene	mg/kg	1																		<1	-	-	<1	-	-
Bis(2-chloroethoxy) methane	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Bis(2-chloroethyl)ether	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Dibenzofuran	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Hexachloropropene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Methapyrilene	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
N-nitrosomorpholine	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
N-nitrosopiperidine	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
N-nitrosopyrrolidine	mg/kg	1																		<1.0	-	-	<1.0	-	-
Phenacetin	mg/kg	0.5																		<0.5	-	-	<0.5	-	-
Per- and Poly-fluoroalkyl Substances (PFAS)																									
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01											<0.0002	-	-	<0.0002	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10												<0.0002	-	-	<0.0002	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																		<0.0005	-	-	<0.0005	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																		<0.0002	-	-	<0.0002	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																		<0.001	-	-	<0.001	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																				BH05	BH05	BH05	BH06	BH06	BH06
Depth																				0.1	0.5	1	0.5	1	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																					<0.0002	-	-	<0.0002	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																					<0.0002	-	-	<0.0002	-	-
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																					<0.0002	-	-	<0.0002	-	-
Sum (PFHxS + PFOS)	mg/kg	0.0002					20																<0.0002	-	-	<0.0002	-	-
Sum of PFAS	µg/kg	0.2																					<0.2	-	-	<0.2	-	-
(n:2) Fluorotelomer Sulfonic Acids																												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																					<0.0005	-	-	<0.0005	-	-
Phenols																												
2,4,5-trichlorophenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2-methylphenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	1																					-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
	µg/L	2																					-	-	-	-	-	-
Pentachlorophenol	mg/kg	1													660								<1	-	-	<1	-	-
	µg/L	2																					-	-	-	-	-	-
Phenol	mg/kg	0.5													240,000								<0.5	-	-	<0.5	-	-
Phenol	µg/L	1																					-	-	-	-	-	-
Phthalates																												
Bis(2-ethylhexyl) phthalate	mg/kg	5																					<5.0	-	-	<5.0	-	-
Butyl benzyl phthalate	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Diethylphthalate	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Dimethyl phthalate	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Di-n-butyl phthalate	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Di-n-octyl phthalate	mg/kg	0.5																					<0.5	-	-	<0.5	-	-

Lab Report Number																					EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																					HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																					BH05	BH05	BH05	BH06	BH06	BH06
Depth																					0.1	0.5	1	0.5	1	2
Date																					31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Organochlorine Pesticides (OCPs)																										
4,4-DDE	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
a-BHC	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Aldrin	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45							<0.05	-	-	<0.05	-	-
	µg/L	0.5			3[#1]																-	-	-	-	-	-
b-BHC	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Chlordane	mg/kg	0.05												530							<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (trans)	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
d-BHC	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
DDD	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
DDT	mg/kg	0.2																	640[#11]		<0.2	-	-	<0.2	-	-
	µg/L	2																			-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600							<0.05	-	-	<0.05	-	-
	µg/L	0.5			200[#1]																-	-	-	-	-	-
Chlorobenzilate	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Dieldrin	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan	mg/kg	0.05												2,000							<0.05	-	-	<0.05	-	-
Endosulfan I	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan II	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan sulfate	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endrin	mg/kg	0.05												100							<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endrin ketone	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor	mg/kg	0.05												50							<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05																			<0.05	-	-	<0.05	-	-
	µg/L	0.5																			-	-	-	-	-	-
Methoxychlor	mg/kg	0.2												2,500							<0.2	-	-	<0.2	-	-
Methoxychlor	µg/L	2																			-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)																										
Chlorfenvinphos	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Chlorpyrifos	mg/kg	0.5												2,000							<0.5	-	-	<0.5	-	-
Chlorpyrifos-methyl	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Diazinon	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Dichlorvos	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Dimethoate	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Ethion	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Fenthion	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Malathion	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Pirimphos-ethyl	mg/kg	0.5																			<0.5	-	-	<0.5	-	-
Prothiofos	mg/kg	0.5																			<0.5	-	-	<0.5	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
Location Code																				BH05	BH05	BH05	BH06	BH06	BH06
Depth																				0.1	0.5	1	0.5	1	2
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Polychlorinated Biphenyls (PCBs)																									
PCBs (Sum of total)	mg/kg	0.1												7[#9]									<0.1	-	-	<0.1	-	-
PCBs (Sum of total)	µg/L	1																					-	-	-	-	-	-
Herbicides																									
Pronamide	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Amino Aliphatics																									
N-nitrosodiethylamine	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
N-nitrosodi-n-butylamine	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
N-nitrosodi-n-propylamine	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
N-Nitrosomethylethylamine	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Amino Aromatics																									
1-naphthylamine	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																					<1.0	-	-	<1.0	-	-
Anilines																									
2-nitroaniline	mg/kg	1																					<1.0	-	-	<1.0	-	-
3-nitroaniline	mg/kg	1																					<1.0	-	-	<1.0	-	-
4-chloroaniline	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
4-nitroaniline	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
2-methyl-5-nitroaniline	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Aniline	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Nitroaromatics																									
2-Picoline	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
4-aminobiphenyl	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Pentachloronitrobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Explosives																									
1,3,5-Trinitrobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
2,4-Dinitrotoluene	mg/kg	1																					<1.0	-	-	<1.0	-	-
2,6-dinitrotoluene	mg/kg	1																					<1.0	-	-	<1.0	-	-
Nitrobenzene	mg/kg	0.5																					<0.5	-	-	<0.5	-	-
Acid Sulfate Soils - Acid Base Accounting																									
Net Acidity (acidity units)	mole H+/t	10																					-	-	-	-	-	-
Net Acidity (sulfur units)	%S	0.02																					-	-	-	-	-	-
Acid Sulfate Soils - Acidity Trail																									
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																						-	-	-	-	-	-
Titratable Actual Acidity (sulfur units)	%S	0.02																					-	-	-	-	-	-
Titratable Peroxide Acidity (sulfur units)	%S	0.02																					-	-	-	-	-	-
Titratable Actual Acidity	mole H+/t	2																					-	-	-	-	-	-
Titratable Sulfidic Acidity	moles H+/t	2																					-	-	-	-	-	-
Acid Sulfate Soils - ANC																									
ANC Fineness Factor	-	0.5																					-	-	-	-	-	-
Net Acidity excluding ANC (sulfur units)	% S	0.02																					-	-	-	-	-	-
Acid Sulfate Soils - Calcium Values																									
Acid Reacted Calcium	% Ca	0.02																					-	-	-	-	-	-
acidity - Acid Reacted Calcium	mole H+/t	10																					-	-	-	-	-	-
Calcium in Peroxide	%	0.02																					-	-	-	-	-	-
KCl Extractable Calcium	%	0.02																					-	-	-	-	-	-
Acid Sulfate Soils - CRS																									
pH (KCl)	pH units	0.1																					-	-	-	-	-	-

	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m		Lab Report Number	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
																							Field ID	HB-BH05-C-0.1	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
																							Location Code	BH05	BH05	BH05	BH06	BH06	BH06
																							Depth	0.1	0.5	1	0.5	1	2
																							Date	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Acid Sulfate Soils - Field																													
Reaction Rate	-	1																					-	-	-	-	-	-
pH (F)	pH Units	0.1																					-	-	-	-	-	-
pHFox	pH Units	0.1																					-	-	-	-	-	-
Acid Sulfate Soils - Liming Rate																													
Liming Rate	kg CaCO3/t	1																					-	-	-	-	-	-
Liming Rate excluding ANC	kg CaCO3/t	1																					-	-	-	-	-	-
Acid Sulfate Soils - Magnesium Values																													
Acid Reacted Magnesium	% Mg	0.02																					-	-	-	-	-	-
Acid Reacted Magnesium (acidity units)	mole H+/t	10																					-	-	-	-	-	-
KCl Extractable Magnesium	%	0.02																					-	-	-	-	-	-
Magnesium in Peroxide	%	0.02																					-	-	-	-	-	-
Acid Reacted Magnesium (sulfur units)	%S	0.02																					-	-	-	-	-	-
Acid Sulfate Soils - pH																													
pH-OX	pH units	0.1																					-	-	-	-	-	-
Acid Sulfate Soils - Retained Acidity																													
HCl Extractable Sulfur	%S	0.02																					-	-	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																					-	-	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																					-	-	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																					-	-	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																													
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																					-	-	-	-	-	-
KCl Extractable Sulfur	%	0.02																					-	-	-	-	-	-
Peroxide Oxidisable Sulfur	%	0.02																					-	-	-	-	-	-
Peroxide Sulfur	%	0.02																					-	-	-	-	-	-
SPOCAS																													
a-Net Acidity without ANCE_	mole H+/t	10	18																				-	-	-	-	-	-
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																					-	-	-	-	-	-
Titratable Peroxide Acidity	mole H+/t	2																					-	-	-	-	-	-
Asbestos																													
Organic Fibre	g/kg	0.1																					Yes	-	No	Yes	-	No
Synthetic Mineral Fibre	g/kg	0.1																					No	-	No	No	-	No
Approved Identifier	Comment																						U.DALKIN	-	U.DALKIN	U.DALKIN	-	U.DALKIN
Sample Weight	g	0.01																					51.5	-	61.3	36.1	-	58.0
Description	Comment																						1[#20]	-	1[#22]	1[#20]	-	1[#23]
Asbestos fibres	g/kg	0.1																					No	-	No	No	-	No
Asbestos (Trace)	Fibres	5																					No	-	No	No	-	No
Asbestos Type	Comment																						-	-	-	-	-	-

	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m		Lab Report Number	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
																						Field ID	HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
																						Location Code	TP01	TP01	TP01	TP02	TP02	TP02
																						Depth	0.1	0.5	1	0.1	0.5	1
																						Date	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
Metals																												
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]				<5	-	<5	-	<5	-
Arsenic (filtered)	µg/L	100			500[#1]																		-	-	-	-	-	-
Barium	mg/kg	10		300		30,000																	40	-	<10	-	<10	-
Barium (filtered)	µg/L	100			35,000[#1]																		-	-	-	-	-	-
Beryllium	mg/kg	1		2		400								500									<1	-	<1	-	<1	-
Beryllium (filtered)	µg/L	50			1,000[#1]																		-	-	-	-	-	-
Boron	mg/kg	50												300,000									<50	-	<50	-	<50	-
Boron (filtered)	µg/L	100																					-	-	-	-	-	-
Cadmium	mg/kg	1		3		400								900									<1	-	<1	-	<1	-
Cadmium (filtered)	µg/L	50			100[#1]																		-	-	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																	17	-	<2	-	5	-
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																		-	-	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000									4	-	<2	-	<2	-
Cobalt (filtered)	µg/L	100			[#2]																		-	-	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]				29	-	<5	-	<5	-
Copper (filtered)	µg/L	100			10,000[#1]																		-	-	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]				120	-	10	-	<5	-
Lead (filtered)	µg/L	100			500[#1]																		-	-	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000									130	-	<5	-	28	-
Manganese (filtered)	µg/L	100			25,000[#1]																		-	-	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]									0.6	-	0.9	-	<0.1	-
Mercury (filtered)	µg/L	1			10[#1]																		-	-	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]				20	-	<2	-	<2	-
Nickel (filtered)	µg/L	100			1,000[#1]																		-	-	-	-	-	-
Selenium	mg/kg	5		10		200								10,000									<5	-	<5	-	<5	-
Selenium (filtered)	µg/L	50			100[#1]																		-	-	-	-	-	-
Silicon (filtered)	mg/kg	1																					-	-	-	-	-	-
Titanium	mg/kg	10																					1,300	-	2,220	-	40	-
Titanium (filtered)	µg/L	100																					-	-	-	-	-	-
Vanadium	mg/kg	5																					17	-	<5	-	5	-
Vanadium (filtered)	µg/L	100																					-	-	-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]				68	-	<5	-	<5	-
Zinc (filtered)	µg/L	100			25,000[#1]																		-	-	-	-	-	-
Inorganics																												
Chloride	mg/kg	10																					10	-	-	-	<10	-
Cyanide Total	mg/kg	1		32		2,500																	-	<1	-	-	-	<1
	mg/L	0.004			1[#1]																		-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																					271	-	-	-	49	-
Silica (filtered)	mg/kg	1																					-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	10																					-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																					330	-	-	-	60	-
Sulphur as S (filtered)	mg/kg	10																					-	-	-	-	-	-
Resistivity (Saturated Paste)																												
Resistivity	OHM.M	0.01																					36.9	-	-	-	204	-
Physiochemical parameters																												
pH of Leaching Fluid	pH Units	0.1																					-	-	-	-	-	-
Moisture Content	%	0.1																					11.8	18.6	9.0	-	7.9	12.4
pH (Lab)	pH Units	0.1																					8.0	-	-	-	7.3	-
pH (Final)	pH Units	0.1																					-	-	-	-	-	-
pH (Initial)	pH Units	0.1																					-	-	-	-	-	-
pH (CaCl2)	pH Units	0.1																					-	-	-	-	-	-
pH (after HCL)	pH Units	0.1																					-	-	-	-	-	-
TRH - NEPM 2013 Fractions																												
TRH >C6 - C10	mg/kg	10								[#4]				26,000									<10	-	<10	-	<10	-
TRH >C10 - C16	mg/kg	50								[#4]				20,000									<50	-	<50	-	<50	-
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500		220	-	<100	-	<100	-
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000		180	-	<100	-	<100	-
TRH >C10 - C40 (Sum of total)	mg/kg	50																					400	-	<50	-	<50	-
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700		<10	-	<10	-	<10	-
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000		<50	-	<50	-	<50	-

Lab Report Number																					EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																					HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Location Code																					TP01	TP01	TP01	TP02	TP02	TP02
Depth																					0.1	0.5	1	0.1	0.5	1
Date																					28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
TPH - NEPM 1999 Fractions																										
TPH C6 - C9	mg/kg	10		65		1,000															<10	-	<10	-	<10	-
TPH C10 - C14	mg/kg	50																			<50	-	<50	-	<50	-
TPH C15 - C28	mg/kg	100																			<100	-	<100	-	<100	-
TPH C29-C36	mg/kg	100																			220	-	<100	-	<100	-
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000															220	-	<50	-	<50	-
Polycyclic aromatic hydrocarbons (PAHs)																										
2-chloronaphthalene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
2-methylnaphthalene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
3-methylcholanthrene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Acenaphthene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Acenaphthylene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Acetophenone	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Anthracene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																			-	<1	-	-	-	<1
Benzo(k)fluoranthene	mg/kg	0.5																			<0.5	-	<0.5	-	<0.5	-
	µg/L	1																			-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																			<0.5	-	<0.5	-	<0.5	-
	µg/L	1																			-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20														1.4[#16]	<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	0.5			0.5[#1]																-	-	-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																			0.6	0.6	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	0.5																			-	-	-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																			1.2	1.2	1.2	-	1.2	1.2
Carbazole	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Chrysene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Fluoranthene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Fluorene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Phenanthrene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Pyrene	mg/kg	0.5																			<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]		<0.5	<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																			-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]							<0.5	<0.5	<0.5	-	<0.5	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																-	-	-	-	-	-

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion								Lab Report Number	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
																							Field ID	HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
																							Location Code	TP01	TP01	TP01	TP02	TP02	TP02
																							Depth	0.1	0.5	1	0.1	0.5	1
																							Date	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
Monocyclic Aromatic Hydrocarbons (MAHs)																													
1,2,4-trimethylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,3,5-trimethylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Isopropylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
n-butylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
n-propylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
p-isopropyltoluene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
sec-butylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
tert-butylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75			<0.2	<0.2	<0.2	-	<0.2	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135			<0.5	<0.5	<0.5	-	<0.5	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165			<0.5	<0.5	<0.5	-	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5																					<0.5	<0.5	<0.5	-	<0.5	<0.5
Xylene (o)	mg/kg	0.5																					<0.5	<0.5	<0.5	-	<0.5	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180			<0.5	-	<0.5	-	<0.5	-
Total BTEX	mg/kg	0.2																					<0.2	-	<0.2	-	<0.2	-
Chlorinated Hydrocarbons																													
1,1,1,2-tetrachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,1,1-trichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,1,2,2-tetrachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,1,2-trichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,1-dichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,1-dichloroethene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,2,3-trichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,2-dibromo-3-chloropropane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,2-dichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,2-dichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,3-dichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
2,2-dichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Bromodichloromethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Bromoform	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Carbon tetrachloride	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Chlorodibromomethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Chloroethane	mg/kg	5																					-	<5	-	-	-	<5
Chloroform	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Chloromethane	mg/kg	5																					-	<5	-	-	-	<5
cis-1,2-dichloroethene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
cis-1,3-dichloropropene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
trans-1,3-dichloropropene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Dibromomethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Hexachlorobutadiene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Hexachlorocyclopentadiene	mg/kg	2.5																					-	<2.5	-	-	-	<2.5
Hexachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Trichloroethene (TCE)	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Tetrachloroethene (PCE)	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Vinyl chloride	mg/kg	5																					-	<5	-	-	-	<5
Halogenated Benzenes																													
1,2,3-trichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,2,4-trichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,2-dichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,3-dichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
1,4-dichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
2-chlorotoluene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
4-chlorotoluene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Bromobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Chlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5
Hexachlorobenzene	mg/kg	0.05												80									-	<0.05	-	-	-	<0.05
	µg/L	0.5																					-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	<0.5

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	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial	HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Location Code																						TP01	TP01	TP01	TP02	TP02	TP02
Depth																						0.1	0.5	1	0.1	0.5	1
Date																						28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m							
Halogenated Hydrocarbons																											
1,2-dibromoethane	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Bromomethane	mg/kg	5																				-	<5	-	-	-	<5
Dichlorodifluoromethane	mg/kg	5																				-	<5	-	-	-	<5
Iodomethane	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Trichlorofluoromethane	mg/kg	5																				-	<5	-	-	-	<5
Solvents																											
Methyl Ethyl Ketone	mg/kg	5																				-	<5	-	-	-	<5
2-hexanone (MBK)	mg/kg	5																				-	<5	-	-	-	<5
4-Methyl-2-pentanone	mg/kg	5																				-	<5	-	-	-	<5
Carbon disulfide	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Isophorone	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Vinyl acetate	mg/kg	5																				-	<5	-	-	-	<5
Volatile Organic Compounds (VOCs)																											
1,1-dichloropropene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
cis-1,4-Dichloro-2-butene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Pentachloroethane	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Styrene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
trans-1,4-Dichloro-2-butene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Semi Volatile Organic Compounds (SVOCs)																											
2-(acetylamino) fluorene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
3,3-Dichlorobenzidine	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
4-(dimethylamino) azobenzene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
4-bromophenyl phenyl ether	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
4-chlorophenyl phenyl ether	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
4-Nitroquinoline-N-oxide	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Azobenzene	mg/kg	1																				-	<1	-	-	-	<1
Bis(2-chloroethoxy) methane	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Bis(2-chloroethyl)ether	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Dibenzofuran	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Hexachloropropene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Methapyrilene	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
N-nitrosomorpholine	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
N-nitrosopiperidine	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
N-nitrosopyrrolidine	mg/kg	1																				-	<1.0	-	-	-	<1.0
Phenacetin	mg/kg	0.5																				-	<0.5	-	-	-	<0.5
Per- and Poly-fluoroalkyl Substances (PFAS)																											
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01													-	<0.0002	-	-	-	<0.0002
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10														-	<0.0002	-	-	-	<0.0002
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																				-	<0.0005	-	-	-	<0.0005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																				-	<0.0002	-	-	-	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																				-	<0.001	-	-	-	<0.001

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Location Code																				TP01	TP01	TP01	TP02	TP02	TP02
Depth																				0.1	0.5	1	0.1	0.5	1
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																			-	<0.0002	-	-	-	<0.0002
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																			-	<0.0002	-	-	-	<0.0002
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																			-	<0.0002	-	-	-	<0.0002
Sum (PFHxS + PFOS)	mg/kg	0.0002					20														-	<0.0002	-	-	-	<0.0002
Sum of PFAS	µg/kg	0.2																			-	<0.2	-	-	-	<0.2
(n:2) Fluorotelomer Sulfonic Acids																										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																			-	<0.0005	-	-	-	<0.0005
Phenols																										
2,4,5-trichlorophenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2-methylphenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	1																			-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
	µg/L	2																			-	-	-	-	-	-
Pentachlorophenol	mg/kg	1												660							-	<1	-	-	-	<1
	µg/L	2																			-	-	-	-	-	-
Phenol	mg/kg	0.5												240,000							-	<0.5	-	-	-	<0.5
Phenol	µg/L	1																			-	-	-	-	-	-
Phthalates																										
Bis(2-ethylhexyl) phthalate	mg/kg	5																			-	<5.0	-	-	-	<5.0
Butyl benzyl phthalate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Diethylphthalate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Dimethyl phthalate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Di-n-butyl phthalate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Di-n-octyl phthalate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5

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Field ID																					HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Location Code																					TP01	TP01	TP01	TP02	TP02	TP02
Depth																					0.1	0.5	1	0.1	0.5	1
Date																					28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Organochlorine Pesticides (OCPs)																										
4,4-DDE	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
a-BHC	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Aldrin	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45							-	<0.05	-	-	-	<0.05
	µg/L	0.5			3[#1]																-	-	-	-	-	-
b-BHC	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Chlordane	mg/kg	0.05												530							-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (trans)	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
d-BHC	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
DDD	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
DDT	mg/kg	0.2																	640[#11]		-	<0.2	-	-	-	<0.2
	µg/L	2																			-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600							-	<0.05	-	-	-	<0.05
	µg/L	0.5			200[#1]																-	-	-	-	-	-
Chlorobenzilate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Dieldrin	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan	mg/kg	0.05												2,000							-	<0.05	-	-	-	<0.05
Endosulfan I	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan II	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan sulfate	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endrin	mg/kg	0.05												100							-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endrin ketone	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor	mg/kg	0.05												50							-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05																			-	<0.05	-	-	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Methoxychlor	mg/kg	0.2												2,500							-	<0.2	-	-	-	<0.2
Methoxychlor	µg/L	2																			-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)																										
Chlorfenvinphos	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Chlorpyrifos	mg/kg	0.5												2,000							-	<0.5	-	-	-	<0.5
Chlorpyrifos-methyl	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Diazinon	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Dichlorvos	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Dimethoate	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Ethion	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Fenthion	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Malathion	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Pirimphos-ethyl	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Prothiofos	mg/kg	0.5																			-	<0.5	-	-	-	<0.5

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Field ID																					HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Location Code																					TP01	TP01	TP01	TP02	TP02	TP02
Depth																					0.1	0.5	1	0.1	0.5	1
Date																					28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Polychlorinated Biphenyls (PCBs)																										
PCBs (Sum of total)	mg/kg	0.1												7[#9]							-	<0.1	-	-	-	<0.1
PCBs (Sum of total)	µg/L	1																			-	-	-	-	-	-
Herbicides																										
Pronamide	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Amino Aliphatics																										
N-nitrosodiethylamine	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
N-nitrosodi-n-butylamine	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
N-nitrosodi-n-propylamine	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
N-Nitrosomethylethylamine	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Amino Aromatics																										
1-naphthylamine	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																			-	<1.0	-	-	-	<1.0
Anilines																										
2-nitroaniline	mg/kg	1																			-	<1.0	-	-	-	<1.0
3-nitroaniline	mg/kg	1																			-	<1.0	-	-	-	<1.0
4-chloroaniline	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
4-nitroaniline	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
2-methyl-5-nitroaniline	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Aniline	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Nitroaromatics																										
2-Picoline	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
4-aminobiphenyl	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Pentachloronitrobenzene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Explosives																										
1,3,5-Trinitrobenzene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
2,4-Dinitrotoluene	mg/kg	1																			-	<1.0	-	-	-	<1.0
2,6-dinitrotoluene	mg/kg	1																			-	<1.0	-	-	-	<1.0
Nitrobenzene	mg/kg	0.5																			-	<0.5	-	-	-	<0.5
Acid Sulfate Soils - Acid Base Accounting																										
Net Acidity (acidity units)	mole H+/t	10																			-	60	-	-	-	<10
Net Acidity (sulfur units)	%S	0.02																			-	0.10	-	-	-	<0.02
Acid Sulfate Soils - Acidity Trail																										
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																				-	0.037	-	-	-	<0.020
Titratable Actual Acidity (sulfur units)	%S	0.02																			-	0.087	-	-	-	<0.020
Titratable Peroxide Acidity (sulfur units)	%S	0.02																			-	0.124	-	-	-	<0.020
Titratable Actual Acidity	mole H+/t	2																			-	54	-	-	-	<2
Titratable Sulfidic Acidity	moles H+/t	2																			-	23	-	-	-	<2
Acid Sulfate Soils - ANC																										
ANC Fineness Factor	-	0.5																			-	1.5	-	-	-	1.5
Net Acidity excluding ANC (sulfur units)	% S	0.02																			-	0.10	-	-	-	<0.02
Acid Sulfate Soils - Calcium Values																										
Acid Reacted Calcium	% Ca	0.02																			-	<0.020	-	-	-	<0.020
acidity - Acid Reacted Calcium	mole H+/t	10																			-	<10	-	-	-	<10
Calcium in Peroxide	%	0.02																			-	0.027	-	-	-	0.302
KCl Extractable Calcium	%	0.02																			-	0.027	-	-	-	0.302
Acid Sulfate Soils - CRS																										
pH (KCl)	pH units	0.1																			-	3.9	-	-	-	6.8

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Field ID																						HB-TP01-C-0.1	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1	HB-TP02-C-0.5	HB-TP02-C-1
Location Code																						TP01	TP01	TP01	TP02	TP02	TP02
Depth																						0.1	0.5	1	0.1	0.5	1
Date																						28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Acid Sulfate Soils - Field																											
Reaction Rate	-	1																				-	2	-	-	-	3
pH (F)	pH Units	0.1																				-	3.7	-	-	-	4.6
pHFox	pH Units	0.1																				-	2.0	-	-	-	2.7
Acid Sulfate Soils - Liming Rate																											
Liming Rate	kg CaCO3/t	1																				-	4	-	-	-	<1
Liming Rate excluding ANC	kg CaCO3/t	1																				-	4	-	-	-	<1
Acid Sulfate Soils - Magnesium Values																											
Acid Reacted Magnesium	% Mg	0.02																				-	<0.020	-	-	-	<0.020
Acid Reacted Magnesium (acidity units)	mole H+/t	10																				-	<10	-	-	-	<10
KCl Extractable Magnesium	%	0.02																				-	<0.020	-	-	-	<0.020
Magnesium in Peroxide	%	0.02																				-	<0.020	-	-	-	<0.020
Acid Reacted Magnesium (sulfur units)	%S	0.02																				-	<0.020	-	-	-	<0.020
Acid Sulfate Soils - pH																											
pH-OX	pH units	0.1																				-	2.9	-	-	-	5.5
Acid Sulfate Soils - Retained Acidity																											
HCl Extractable Sulfur	%S	0.02																				-	0.075	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																				-	<0.020	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																				-	<10	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																				-	<0.020	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																											
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																				-	11	-	-	-	<10
KCl Extractable Sulfur	%	0.02																				-	0.081	-	-	-	<0.020
Peroxide Oxidisable Sulfur	%	0.02																				-	<0.020	-	-	-	<0.020
Peroxide Sulfur	%	0.02																				-	0.100	-	-	-	<0.020
SPOCAS																											
a-Net Acidity without ANCE_	mole H+/t	10	18																			-	60	-	-	-	<10
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																				-	<12	-	-	-	<12
Titratable Peroxide Acidity	mole H+/t	2																				-	77	-	-	-	<2
Asbestos																											
Organic Fibre	g/kg	0.1																				-	Yes	-	Yes	-	Yes
Synthetic Mineral Fibre	g/kg	0.1																				-	No	-	No	-	No
Approved Identifier	Comment																					-	U.DALKIN	-	U.DALKIN	-	U.DALKIN
Sample Weight	g	0.01																				-	447	-	486	-	418
Description	Comment																					-	1[#20]	-	1[#20]	-	1[#24]
Asbestos fibres	g/kg	0.1																				-	No	-	No	-	No
Asbestos (Trace)	Fibres	5																				-	No	-	No	-	No
Asbestos Type	Comment																					-	-	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																				TP02	TP03	TP03	TP03	TP03	TP03
Depth																				2	0.1	0.5	1	2	3
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Metals																									
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			5	-	-	<5	-	<5
Arsenic (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Barium	mg/kg	10		300		30,000																<10	-	-	<10	-	<10
Barium (filtered)	µg/L	100			35,000[#1]																	-	-	-	-	-	-
Beryllium	mg/kg	1		2		400								500								<1	-	-	<1	-	<1
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	-	-	-	-	-
Boron	mg/kg	50												300,000								<50	-	-	<50	-	<50
Boron (filtered)	µg/L	100																				-	-	-	-	-	-
Cadmium	mg/kg	1		3		400								900								<1	-	-	<1	-	<1
Cadmium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																7	-	-	10	-	5
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000								<2	-	-	<2	-	<2
Cobalt (filtered)	µg/L	100			[#2]																	-	-	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			6	-	-	<5	-	9
Copper (filtered)	µg/L	100			10,000[#1]																	-	-	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			99	-	-	<5	-	<5
Lead (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000								14	-	-	15	-	7
Manganese (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								<0.1	-	-	<0.1	-	<0.1
Mercury (filtered)	µg/L	1			10[#1]																	-	-	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			<2	-	-	3	-	4
Nickel (filtered)	µg/L	100			1,000[#1]																	-	-	-	-	-	-
Selenium	mg/kg	5		10		200								10,000								<5	-	-	<5	-	<5
Selenium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	-	-	-
Titanium	mg/kg	10																				40	-	-	80	-	40
Titanium (filtered)	µg/L	100																				-	-	-	-	-	-
Vanadium	mg/kg	5																				8	-	-	12	-	<5
Vanadium (filtered)	µg/L	100																				-	-	-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			16	-	-	<5	-	<5
Zinc (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Inorganics																											
Chloride	mg/kg	10																				-	-	-	-	-	30
Cyanide Total	mg/kg	1		32		2,500																-	<1	-	-	-	-
	mg/L	0.004			1[#1]																	-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																				-	-	-	-	-	36
Silica (filtered)	mg/kg	1																				-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				-	-	-	-	-	40
Sulphur as S (filtered)	mg/kg	10																				-	-	-	-	-	-
Resistivity (Saturated Paste)																											
Resistivity	OHM.M	0.01																				-	-	-	-	-	278
Physiochemical parameters																											
pH of Leaching Fluid	pH Units	0.1																				-	-	-	-	-	-
Moisture Content	%	0.1																				14.2	5.1	-	10.5	-	15.9
pH (Lab)	pH Units	0.1																				-	-	-	-	-	6.4
pH (Final)	pH Units	0.1																				-	-	-	-	-	-
pH (Initial)	pH Units	0.1																				-	-	-	-	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	-	-	-
pH (after HCL)	pH Units	0.1																				-	-	-	-	-	-
TRH - NEPM 2013 Fractions																											
TRH >C6 - C10	mg/kg	10								[#4]				26,000								<10	-	-	<10	-	<10
TRH >C10 - C16	mg/kg	50								[#4]				20,000								<50	-	-	<50	-	<50
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500	<100	-	-	<100	-	<100
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000	<100	-	-	<100	-	<100
TRH >C10 - C40 (Sum of total)	mg/kg	50																				<50	-	-	<50	-	<50
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	<10	-	-	<10	-	<10
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	<50	-	-	<50	-	<50

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion									
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
Lab Report Number																					EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																					HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																					TP02	TP03	TP03	TP03	TP03	TP03
Depth																					2	0.1	0.5	1	2	3
Date																					28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
TPH - NEPM 1999 Fractions																										
TPH C6 - C9	mg/kg	10		65		1,000															<10	-	-	<10	-	<10
TPH C10 - C14	mg/kg	50																			<50	-	-	<50	-	<50
TPH C15 - C28	mg/kg	100																			<100	-	-	<100	-	<100
TPH C29-C36	mg/kg	100																			<100	-	-	<100	-	<100
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000															<50	-	-	<50	-	<50
Polycyclic aromatic hydrocarbons (PAHs)																										
2-chloronaphthalene	mg/kg	0.5																			-	<0.5	-	-	-	-
2-methylnaphthalene	mg/kg	0.5																			-	<0.5	-	-	-	-
3-methylcholanthrene	mg/kg	0.5																			-	<0.5	-	-	-	-
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																			-	<0.5	-	-	-	-
Acenaphthene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Acenaphthylene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Acetophenone	mg/kg	0.5																			-	<0.5	-	-	-	-
Anthracene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																			-	<1	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.5																			<0.5	-	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																			<0.5	-	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20														1.4[#16]	<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	0.5			0.5[#1]																-	-	-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																			0.6	0.6	-	0.6	-	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	0.5																			-	-	-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																			1.2	1.2	-	1.2	-	1.2
Carbazole	mg/kg	0.5																			-	<0.5	-	-	-	-
Chrysene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Fluoranthene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Fluorene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Phenanthrene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Pyrene	mg/kg	0.5																			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]		<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]							<0.5	<0.5	-	<0.5	-	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																-	-	-	-	-	-

Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																						TP02	TP03	TP03	TP03	TP03	TP03
Depth																						2	0.1	0.5	1	2	3
Date																						28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Monocyclic Aromatic Hydrocarbons (MAHs)																											
1,2,4-trimethylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
Isopropylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
n-butylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
n-propylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
p-isopropyltoluene	mg/kg	0.5																				-	<0.5	-	-	-	-
sec-butylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
tert-butylbenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75		<0.2	<0.2	-	<0.2	-	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135		<0.5	<0.5	-	<0.5	-	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165		<0.5	<0.5	-	<0.5	-	<0.5
Xylene (m & p)	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
Xylene (o)	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180		<0.5	-	-	<0.5	-	<0.5
Total BTEX	mg/kg	0.2																				<0.2	-	-	<0.2	-	<0.2
Chlorinated Hydrocarbons																											
1,1,1,2-tetrachloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,1-dichloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,1-dichloroethene	mg/kg	0.5																				-	<0.5	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,2-dichloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,2-dichloropropane	mg/kg	0.5																				-	<0.5	-	-	-	-
1,3-dichloropropane	mg/kg	0.5																				-	<0.5	-	-	-	-
2,2-dichloropropane	mg/kg	0.5																				-	<0.5	-	-	-	-
Bromodichloromethane	mg/kg	0.5																				-	<0.5	-	-	-	-
Bromoform	mg/kg	0.5																				-	<0.5	-	-	-	-
Carbon tetrachloride	mg/kg	0.5																				-	<0.5	-	-	-	-
Chlorodibromomethane	mg/kg	0.5																				-	<0.5	-	-	-	-
Chloroethane	mg/kg	5																				-	<5	-	-	-	-
Chloroform	mg/kg	0.5																				-	<0.5	-	-	-	-
Chloromethane	mg/kg	5																				-	<5	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5																				-	<0.5	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5																				-	<0.5	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5																				-	<0.5	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5																				-	<0.5	-	-	-	-
Dibromomethane	mg/kg	0.5																				-	<0.5	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5																				-	<0.5	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	2.5																				-	<2.5	-	-	-	-
Hexachloroethane	mg/kg	0.5																				-	<0.5	-	-	-	-
Trichloroethene (TCE)	mg/kg	0.5																				-	<0.5	-	-	-	-
Tetrachloroethene (PCE)	mg/kg	0.5																				-	<0.5	-	-	-	-
Vinyl chloride	mg/kg	5																				-	<5	-	-	-	-
Halogenated Benzenes																											
1,2,3-trichlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
2-chlorotoluene	mg/kg	0.5																				-	<0.5	-	-	-	-
4-chlorotoluene	mg/kg	0.5																				-	<0.5	-	-	-	-
Bromobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
Chlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-
Hexachlorobenzene	mg/kg	0.05												80								-	<0.05	-	-	-	-
	µg/L	0.5																				-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5																				-	<0.5	-	-	-	-

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion									
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
Lab Report Number																							EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																							HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																							TP02	TP03	TP03	TP03	TP03	TP03
Depth																							2	0.1	0.5	1	2	3
Date																							28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Halogenated Hydrocarbons																												
1,2-dibromoethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Bromomethane	mg/kg	5																					-	<5	-	-	-	-
Dichlorodifluoromethane	mg/kg	5																					-	<5	-	-	-	-
Iodomethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Trichlorofluoromethane	mg/kg	5																					-	<5	-	-	-	-
Solvents																												
Methyl Ethyl Ketone	mg/kg	5																					-	<5	-	-	-	-
2-hexanone (MBK)	mg/kg	5																					-	<5	-	-	-	-
4-Methyl-2-pentanone	mg/kg	5																					-	<5	-	-	-	-
Carbon disulfide	mg/kg	0.5																					-	<0.5	-	-	-	-
Isophorone	mg/kg	0.5																					-	<0.5	-	-	-	-
Vinyl acetate	mg/kg	5																					-	<5	-	-	-	-
Volatile Organic Compounds (VOCs)																												
1,1-dichloropropene	mg/kg	0.5																					-	<0.5	-	-	-	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5																					-	<0.5	-	-	-	-
Pentachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Styrene	mg/kg	0.5																					-	<0.5	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5																					-	<0.5	-	-	-	-
Semi Volatile Organic Compounds (SVOCs)																												
2-(acetylamino) fluorene	mg/kg	0.5																					-	<0.5	-	-	-	-
3,3-Dichlorobenzidine	mg/kg	0.5																					-	<0.5	-	-	-	-
4-(dimethylamino) azobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
4-bromophenyl phenyl ether	mg/kg	0.5																					-	<0.5	-	-	-	-
4-chlorophenyl phenyl ether	mg/kg	0.5																					-	<0.5	-	-	-	-
4-Nitroquinoline-N-oxide	mg/kg	0.5																					-	<0.5	-	-	-	-
Azobenzene	mg/kg	1																					-	<1	-	-	-	-
Bis(2-chloroethoxy) methane	mg/kg	0.5																					-	<0.5	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.5																					-	<0.5	-	-	-	-
Dibenzofuran	mg/kg	0.5																					-	<0.5	-	-	-	-
Hexachloropropene	mg/kg	0.5																					-	<0.5	-	-	-	-
Methapyrilene	mg/kg	0.5																					-	<0.5	-	-	-	-
N-nitrosomorpholine	mg/kg	0.5																					-	<0.5	-	-	-	-
N-nitrosopiperidine	mg/kg	0.5																					-	<0.5	-	-	-	-
N-nitrosopyrrolidine	mg/kg	1																					-	<1.0	-	-	-	-
Phenacetin	mg/kg	0.5																					-	<0.5	-	-	-	-
Per- and Poly-fluoroalkyl Substances (PFAS)																												
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01														-	<0.0002	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10															-	<0.0002	-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																					-	<0.001	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																				TP02	TP03	TP03	TP03	TP03	TP03
Depth																				2	0.1	0.5	1	2	3
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																					-	<0.0002	-	-	-	-
Sum (PFHxS + PFOS)	mg/kg	0.0002					20																-	<0.0002	-	-	-	-
Sum of PFAS	µg/kg	0.2																					-	<0.2	-	-	-	-
(n:2) Fluorotelomer Sulfonic Acids																												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
Phenols																												
2,4,5-trichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2-methylphenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	2																					-	-	-	-	-	-
Pentachlorophenol	mg/kg	1													660								-	<1	-	-	-	-
	µg/L	2																					-	-	-	-	-	-
Phenol	mg/kg	0.5													240,000								-	<0.5	-	-	-	-
Phenol	µg/L	1																					-	-	-	-	-	-
Phthalates																												
Bis(2-ethylhexyl) phthalate	mg/kg	5																					-	<5.0	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Diethylphthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Dimethyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Di-n-butyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Di-n-octyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																				TP02	TP03	TP03	TP03	TP03	TP03
Depth																				2	0.1	0.5	1	2	3
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Organochlorine Pesticides (OCPs)																									
4,4-DDE	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
a-BHC	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Aldrin	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45							-	<0.05	-	-	-	-
	µg/L	0.5			3[#1]																-	-	-	-	-	-
b-BHC	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Chlordane	mg/kg	0.05												530							-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (trans)	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
d-BHC	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
DDD	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
DDT	mg/kg	0.2																	640[#11]		-	<0.2	-	-	-	-
	µg/L	2																			-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600							-	<0.05	-	-	-	-
	µg/L	0.5			200[#1]																-	-	-	-	-	-
Chlorobenzilate	mg/kg	0.5																			-	<0.5	-	-	-	-
Dieldrin	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan	mg/kg	0.05												2,000							-	<0.05	-	-	-	-
Endosulfan I	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan II	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan sulfate	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endrin	mg/kg	0.05												100							-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Endrin ketone	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor	mg/kg	0.05												50							-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05																			-	<0.05	-	-	-	-
	µg/L	0.5																			-	-	-	-	-	-
Methoxychlor	mg/kg	0.2												2,500							-	<0.2	-	-	-	-
Methoxychlor	µg/L	2																			-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)																									
Chlorfenvinphos	mg/kg	0.5																			-	<0.5	-	-	-	-
Chlorpyrifos	mg/kg	0.5												2,000							-	<0.5	-	-	-	-
Chlorpyrifos-methyl	mg/kg	0.5																			-	<0.5	-	-	-	-
Diazinon	mg/kg	0.5																			-	<0.5	-	-	-	-
Dichlorvos	mg/kg	0.5																			-	<0.5	-	-	-	-
Dimethoate	mg/kg	0.5																			-	<0.5	-	-	-	-
Ethion	mg/kg	0.5																			-	<0.5	-	-	-	-
Fenthion	mg/kg	0.5																			-	<0.5	-	-	-	-
Malathion	mg/kg	0.5																			-	<0.5	-	-	-	-
Pirimphos-ethyl	mg/kg	0.5																			-	<0.5	-	-	-	-
Prothiofos	mg/kg	0.5																			-	<0.5	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																				TP02	TP03	TP03	TP03	TP03	TP03
Depth																				2	0.1	0.5	1	2	3
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Polychlorinated Biphenyls (PCBs)																									
PCBs (Sum of total)	mg/kg	0.1												7[#9]						-	<0.1	-	-	-	-
PCBs (Sum of total)	µg/L	1																		-	-	-	-	-	-
Herbicides																									
Pronamide	mg/kg	0.5																		-	<0.5	-	-	-	-
Amino Aliphatics																									
N-nitrosodiethylamine	mg/kg	0.5																		-	<0.5	-	-	-	-
N-nitrosodi-n-butylamine	mg/kg	0.5																		-	<0.5	-	-	-	-
N-nitrosodi-n-propylamine	mg/kg	0.5																		-	<0.5	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	0.5																		-	<0.5	-	-	-	-
Amino Aromatics																									
1-naphthylamine	mg/kg	0.5																		-	<0.5	-	-	-	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																		-	<1.0	-	-	-	-
Anilines																									
2-nitroaniline	mg/kg	1																		-	<1.0	-	-	-	-
3-nitroaniline	mg/kg	1																		-	<1.0	-	-	-	-
4-chloroaniline	mg/kg	0.5																		-	<0.5	-	-	-	-
4-nitroaniline	mg/kg	0.5																		-	<0.5	-	-	-	-
2-methyl-5-nitroaniline	mg/kg	0.5																		-	<0.5	-	-	-	-
Aniline	mg/kg	0.5																		-	<0.5	-	-	-	-
Nitroaromatics																									
2-Picoline	mg/kg	0.5																		-	<0.5	-	-	-	-
4-aminobiphenyl	mg/kg	0.5																		-	<0.5	-	-	-	-
Pentachloronitrobenzene	mg/kg	0.5																		-	<0.5	-	-	-	-
Explosives																									
1,3,5-Trinitrobenzene	mg/kg	0.5																		-	<0.5	-	-	-	-
2,4-Dinitrotoluene	mg/kg	1																		-	<1.0	-	-	-	-
2,6-dinitrotoluene	mg/kg	1																		-	<1.0	-	-	-	-
Nitrobenzene	mg/kg	0.5																		-	<0.5	-	-	-	-
Acid Sulfate Soils - Acid Base Accounting																									
Net Acidity (acidity units)	mole H+/t	10																		-	-	-	-	<10	-
Net Acidity (sulfur units)	%S	0.02																		-	-	-	-	<0.02	-
Acid Sulfate Soils - Acidity Trail																									
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																			-	-	-	-	<0.020	-
Titratable Actual Acidity (sulfur units)	%S	0.02																		-	-	-	-	<0.020	-
Titratable Peroxide Acidity (sulfur units)	%S	0.02																		-	-	-	-	<0.020	-
Titratable Actual Acidity	mole H+/t	2																		-	-	-	-	<2	-
Titratable Sulfidic Acidity	moles H+/t	2																		-	-	-	-	6	-
Acid Sulfate Soils - ANC																									
ANC Fineness Factor	-	0.5																		-	-	-	-	1.5	-
Net Acidity excluding ANC (sulfur units)	% S	0.02																		-	-	-	-	<0.02	-
Acid Sulfate Soils - Calcium Values																									
Acid Reacted Calcium	% Ca	0.02																		-	-	-	-	<0.020	-
acidity - Acid Reacted Calcium	mole H+/t	10																		-	-	-	-	<10	-
Calcium in Peroxide	%	0.02																		-	-	-	-	<0.020	-
KCl Extractable Calcium	%	0.02																		-	-	-	-	<0.020	-
Acid Sulfate Soils - CRS																									
pH (KCl)	pH units	0.1																		-	-	-	-	5.9	-

	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3
Location Code																						TP02	TP03	TP03	TP03	TP03	TP03
Depth																						2	0.1	0.5	1	2	3
Date																						28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Acid Sulfate Soils - Field																											
Reaction Rate	-	1																				-	-	-	-	2	-
pH (F)	pH Units	0.1																				-	-	-	-	6.3	-
pHFox	pH Units	0.1																				-	-	-	-	4.0	-
Acid Sulfate Soils - Liming Rate																											
Liming Rate	kg CaCO3/t	1																				-	-	-	-	<1	-
Liming Rate excluding ANC	kg CaCO3/t	1																				-	-	-	-	<1	-
Acid Sulfate Soils - Magnesium Values																											
Acid Reacted Magnesium	% Mg	0.02																				-	-	-	-	<0.020	-
Acid Reacted Magnesium (acidity units)	mole H+/t	10																				-	-	-	-	<10	-
KCl Extractable Magnesium	%	0.02																				-	-	-	-	<0.020	-
Magnesium in Peroxide	%	0.02																				-	-	-	-	<0.020	-
Acid Reacted Magnesium (sulfur units)	%S	0.02																				-	-	-	-	<0.020	-
Acid Sulfate Soils - pH																											
pH-OX	pH units	0.1																				-	-	-	-	5.6	-
Acid Sulfate Soils - Retained Acidity																											
HCl Extractable Sulfur	%S	0.02																				-	-	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																				-	-	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																				-	-	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																											
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	<10	-
KCl Extractable Sulfur	%	0.02																				-	-	-	-	<0.020	-
Peroxide Oxidisable Sulfur	%	0.02																				-	-	-	-	<0.020	-
Peroxide Sulfur	%	0.02																				-	-	-	-	<0.020	-
SPOCAS																											
a-Net Acidity without ANCE_	mole H+/t	10	18																			-	-	-	-	<10	-
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																				-	-	-	-	<12	-
Titratable Peroxide Acidity	mole H+/t	2																				-	-	-	-	6	-
Asbestos																											
Organic Fibre	g/kg	0.1																				-	Yes	No	-	-	-
Synthetic Mineral Fibre	g/kg	0.1																				-	No	No	-	-	-
Approved Identifier	Comment																					-	U.DALKIN	U.DALKIN	-	-	-
Sample Weight	g	0.01																				-	42.3	58.4	-	-	-
Description	Comment																					-	1[#25]	1[#22]	-	-	-
Asbestos fibres	g/kg	0.1																				-	No	No	-	-	-
Asbestos (Trace)	Fibres	5																				-	No	No	-	-	-
Asbestos Type	Comment																					-	-	-	-	-	-

	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																						TP04	TP04	TP04	TP04	TP05	TP05
Depth																						0.1	0.5	1	3	0.1	0.5
Date																						31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
Metals																											
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			<5	-	-	<5	-	<5
Arsenic (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Barium	mg/kg	10		300		30,000																<10	-	-	<10	-	60
Barium (filtered)	µg/L	100			35,000[#1]																	-	-	-	-	-	-
Beryllium	mg/kg	1		2		400								500								<1	-	-	<1	-	<1
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	-	-	-	-	-
Boron	mg/kg	50												300,000								<50	-	-	<50	-	<50
Boron (filtered)	µg/L	100																				-	-	-	-	-	-
Cadmium	mg/kg	1		3		400								900								<1	-	-	<1	-	<1
Cadmium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																6	-	-	6	-	20
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000								<2	-	-	<2	-	5
Cobalt (filtered)	µg/L	100			[#2]																	-	-	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			7	-	-	14	-	23
Copper (filtered)	µg/L	100			10,000[#1]																	-	-	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			7	-	-	<5	-	173
Lead (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000								57	-	-	5	-	185
Manganese (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								<0.1	-	-	<0.1	-	1.0
Mercury (filtered)	µg/L	1			10[#1]																	-	-	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			10	-	-	10	-	26
Nickel (filtered)	µg/L	100			1,000[#1]																	-	-	-	-	-	-
Selenium	mg/kg	5		10		200								10,000								<5	-	-	<5	-	<5
Selenium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	-	-	-
Titanium	mg/kg	10																				200	-	-	50	-	680
Titanium (filtered)	µg/L	100																				-	-	-	-	-	-
Vanadium	mg/kg	5																				6	-	-	7	-	9
Vanadium (filtered)	µg/L	100																				-	-	-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			11	-	-	9	-	230
Zinc (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Inorganics																											
Chloride	mg/kg	10																				-	-	-	10	-	<10
Cyanide Total	mg/kg	1		32		2,500																-	<1	-	-	-	-
	mg/L	0.004			1[#1]																	-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																				-	-	-	33	-	180
Silica (filtered)	mg/kg	1																				-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				-	-	-	50	-	80
Sulphur as S (filtered)	mg/kg	10																				-	-	-	-	-	-
Resistivity (Saturated Paste)																											
Resistivity	OHM.M	0.01																				-	-	-	303	-	55.6
Physiochemical parameters																											
pH of Leaching Fluid	pH Units	0.1																				-	-	-	-	-	-
Moisture Content	%	0.1																				6.8	5.3	-	8.8	-	16.3
pH (Lab)	pH Units	0.1																				-	-	-	5.1	-	8.1
pH (Final)	pH Units	0.1																				-	-	-	-	-	-
pH (Initial)	pH Units	0.1																				-	-	-	-	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	-	-	-
pH (after HCL)	pH Units	0.1																				-	-	-	-	-	-
TRH - NEPM 2013 Fractions																											
TRH >C6 - C10	mg/kg	10								[#4]				26,000								<10	-	-	<10	-	<10
TRH >C10 - C16	mg/kg	50								[#4]				20,000								<50	-	-	<50	-	<50
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500	<100	-	-	<100	-	<100
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000	<100	-	-	<100	-	<100
TRH >C10 - C40 (Sum of total)	mg/kg	50																				<50	-	-	<50	-	<50
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	<10	-	-	<10	-	<10
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	<50	-	-	<50	-	<50

Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																						TP04	TP04	TP04	TP04	TP05	TP05
Depth																						0.1	0.5	1	3	0.1	0.5
Date																						31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m							
TPH - NEPM 1999 Fractions																											
TPH C6 - C9	mg/kg	10		65		1,000																<10	-	-	<10	-	<10
TPH C10 - C14	mg/kg	50																				<50	-	-	<50	-	<50
TPH C15 - C28	mg/kg	100																				<100	-	-	<100	-	<100
TPH C29-C36	mg/kg	100																				<100	-	-	<100	-	<100
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000																<50	-	-	<50	-	<50
Polycyclic aromatic hydrocarbons (PAHs)																											
2-chloronaphthalene	mg/kg	0.5																				-	<0.5	-	-	-	-
2-methylnaphthalene	mg/kg	0.5																				-	<0.5	-	-	-	-
3-methylcholanthrene	mg/kg	0.5																				-	<0.5	-	-	-	-
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																				-	<0.5	-	-	-	-
Acenaphthene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Acenaphthylene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Acetophenone	mg/kg	0.5																				-	<0.5	-	-	-	-
Anthracene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																				-	<1	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.5																				<0.5	-	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																				<0.5	-	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20																<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	0.5			0.5[#1]																	-	-	-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																				0.6	0.6	-	0.6	-	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	0.5																				-	-	-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																				1.2	1.2	-	1.2	-	1.2
Carbazole	mg/kg	0.5																				-	<0.5	-	-	-	-
Chrysene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Fluoranthene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Fluorene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Phenanthrene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Pyrene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]			<0.5	<0.5	-	<0.5	-	<0.5
	µg/L	1																				-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]								<0.5	<0.5	-	<0.5	-	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																	-	-	-	-	-	-

Lab Report Number																								EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																								HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																								TP04	TP04	TP04	TP04	TP05	TP05
Depth																								0.1	0.5	1	3	0.1	0.5
Date																								31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial							
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m							
Monocyclic Aromatic Hydrocarbons (MAHs)																													
1,2,4-trimethylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
Isopropylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
n-butylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
n-propylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
p-isopropyltoluene	mg/kg	0.5																					-	<0.5	-	-	-	-
sec-butylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
tert-butylbenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75			<0.2	<0.2	-	<0.2	-	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135			<0.5	<0.5	-	<0.5	-	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165			<0.5	<0.5	-	<0.5	-	<0.5
Xylene (m & p)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	-	<0.5
Xylene (o)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	-	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180			<0.5	-	-	<0.5	-	<0.5
Total BTEX	mg/kg	0.2																					<0.2	-	-	<0.2	-	<0.2
Chlorinated Hydrocarbons																													
1,1,1,2-tetrachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,1-dichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,1-dichloroethene	mg/kg	0.5																					-	<0.5	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,2-dichloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,2-dichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	-
1,3-dichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	-
2,2-dichloropropane	mg/kg	0.5																					-	<0.5	-	-	-	-
Bromodichloromethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Bromoform	mg/kg	0.5																					-	<0.5	-	-	-	-
Carbon tetrachloride	mg/kg	0.5																					-	<0.5	-	-	-	-
Chlorodibromomethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Chloroethane	mg/kg	5																					-	<5	-	-	-	-
Chloroform	mg/kg	0.5																					-	<0.5	-	-	-	-
Chloromethane	mg/kg	5																					-	<5	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5																					-	<0.5	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5																					-	<0.5	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5																					-	<0.5	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5																					-	<0.5	-	-	-	-
Dibromomethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5																					-	<0.5	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	2.5																					-	<2.5	-	-	-	-
Hexachloroethane	mg/kg	0.5																					-	<0.5	-	-	-	-
Trichloroethene (TCE)	mg/kg	0.5																					-	<0.5	-	-	-	-
Tetrachloroethene (PCE)	mg/kg	0.5																					-	<0.5	-	-	-	-
Vinyl chloride	mg/kg	5																					-	<5	-	-	-	-
Halogenated Benzenes																													
1,2,3-trichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
2-chlorotoluene	mg/kg	0.5																					-	<0.5	-	-	-	-
4-chlorotoluene	mg/kg	0.5																					-	<0.5	-	-	-	-
Bromobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
Chlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-
Hexachlorobenzene	mg/kg	0.05												80									-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5																					-	<0.5	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																				TP04	TP04	TP04	TP04	TP05	TP05
Depth																				0.1	0.5	1	3	0.1	0.5
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Halogenated Hydrocarbons																									
1,2-dibromoethane	mg/kg	0.5																		-	<0.5	-	-	-	-
Bromomethane	mg/kg	5																		-	<5	-	-	-	-
Dichlorodifluoromethane	mg/kg	5																		-	<5	-	-	-	-
Iodomethane	mg/kg	0.5																		-	<0.5	-	-	-	-
Trichlorofluoromethane	mg/kg	5																		-	<5	-	-	-	-
Solvents																									
Methyl Ethyl Ketone	mg/kg	5																		-	<5	-	-	-	-
2-hexanone (MBK)	mg/kg	5																		-	<5	-	-	-	-
4-Methyl-2-pentanone	mg/kg	5																		-	<5	-	-	-	-
Carbon disulfide	mg/kg	0.5																		-	<0.5	-	-	-	-
Isophorone	mg/kg	0.5																		-	<0.5	-	-	-	-
Vinyl acetate	mg/kg	5																		-	<5	-	-	-	-
Volatile Organic Compounds (VOCs)																									
1,1-dichloropropene	mg/kg	0.5																		-	<0.5	-	-	-	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5																		-	<0.5	-	-	-	-
Pentachloroethane	mg/kg	0.5																		-	<0.5	-	-	-	-
Styrene	mg/kg	0.5																		-	<0.5	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5																		-	<0.5	-	-	-	-
Semi Volatile Organic Compounds (SVOCs)																									
2-(acetylamino) fluorene	mg/kg	0.5																		-	<0.5	-	-	-	-
3,3-Dichlorobenzidine	mg/kg	0.5																		-	<0.5	-	-	-	-
4-(dimethylamino) azobenzene	mg/kg	0.5																		-	<0.5	-	-	-	-
4-bromophenyl phenyl ether	mg/kg	0.5																		-	<0.5	-	-	-	-
4-chlorophenyl phenyl ether	mg/kg	0.5																		-	<0.5	-	-	-	-
4-Nitroquinoline-N-oxide	mg/kg	0.5																		-	<0.5	-	-	-	-
Azobenzene	mg/kg	1																		-	<1	-	-	-	-
Bis(2-chloroethoxy) methane	mg/kg	0.5																		-	<0.5	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.5																		-	<0.5	-	-	-	-
Dibenzofuran	mg/kg	0.5																		-	<0.5	-	-	-	-
Hexachloropropene	mg/kg	0.5																		-	<0.5	-	-	-	-
Methapyrilene	mg/kg	0.5																		-	<0.5	-	-	-	-
N-nitrosomorpholine	mg/kg	0.5																		-	<0.5	-	-	-	-
N-nitrosopiperidine	mg/kg	0.5																		-	<0.5	-	-	-	-
N-nitrosopyrrolidine	mg/kg	1																		-	<1.0	-	-	-	-
Phenacetin	mg/kg	0.5																		-	<0.5	-	-	-	-
Per- and Poly-fluoroalkyl Substances (PFAS)																									
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01											-	<0.0002	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10												-	<0.0002	-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																		-	<0.0005	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																		-	<0.0002	-	-	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																		-	<0.001	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																				TP04	TP04	TP04	TP04	TP05	TP05
Depth																				0.1	0.5	1	3	0.1	0.5
Date																				31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																					-	<0.0002	-	-	-	-
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																					-	<0.0002	-	-	-	-
Sum (PFHxS + PFOS)	mg/kg	0.0002					20																-	<0.0002	-	-	-	-
Sum of PFAS	µg/kg	0.2																					-	<0.2	-	-	-	-
(n:2) Fluorotelomer Sulfonic Acids																												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																					-	<0.0005	-	-	-	-
Phenols																												
2,4,5-trichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2-methylphenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	1																					-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																					-	<0.5	-	-	-	-
	µg/L	2																					-	-	-	-	-	-
Pentachlorophenol	mg/kg	1													660								-	<1	-	-	-	-
	µg/L	2																					-	-	-	-	-	-
Phenol	mg/kg	0.5													240,000								-	<0.5	-	-	-	-
Phenol	µg/L	1																					-	-	-	-	-	-
Phthalates																												
Bis(2-ethylhexyl) phthalate	mg/kg	5																					-	<5.0	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Diethylphthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Dimethyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Di-n-butyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-
Di-n-octyl phthalate	mg/kg	0.5																					-	<0.5	-	-	-	-

Lab Report Number																								EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																								HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																								TP04	TP04	TP04	TP04	TP05	TP05
Depth																								0.1	0.5	1	3	0.1	0.5
Date																								31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m							
Organochlorine Pesticides (OCPs)																													
4,4-DDE	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
a-BHC	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Aldrin	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45									-	<0.05	-	-	-	-
	µg/L	0.5			3[#1]																		-	-	-	-	-	-
b-BHC	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Chlordane	mg/kg	0.05												530									-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Chlordane (trans)	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
d-BHC	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
DDD	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
DDT	mg/kg	0.2																		640[#11]			-	<0.2	-	-	-	-
	µg/L	2																					-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600									-	<0.05	-	-	-	-
	µg/L	0.5			200[#1]																		-	-	-	-	-	-
Chlorobenzilate	mg/kg	0.5																					-	<0.5	-	-	-	-
Dieldrin	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Endosulfan	mg/kg	0.05												2,000									-	<0.05	-	-	-	-
Endosulfan I	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Endosulfan II	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Endosulfan sulfate	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Endrin	mg/kg	0.05												100									-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Endrin ketone	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Heptachlor	mg/kg	0.05												50									-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05																					-	<0.05	-	-	-	-
	µg/L	0.5																					-	-	-	-	-	-
Methoxychlor	mg/kg	0.2												2,500									-	<0.2	-	-	-	-
Methoxychlor	µg/L	2																					-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)																													
Chlorfenvinphos	mg/kg	0.5																					-	<0.5	-	-	-	-
Chlorpyrifos	mg/kg	0.5												2,000									-	<0.5	-	-	-	-
Chlorpyrifos-methyl	mg/kg	0.5																					-	<0.5	-	-	-	-
Diazinon	mg/kg	0.5																					-	<0.5	-	-	-	-
Dichlorvos	mg/kg	0.5																					-	<0.5	-	-	-	-
Dimethoate	mg/kg	0.5																					-	<0.5	-	-	-	-
Ethion	mg/kg	0.5																					-	<0.5	-	-	-	-
Fenthion	mg/kg	0.5																					-	<0.5	-	-	-	-
Malathion	mg/kg	0.5																					-	<0.5	-	-	-	-
Pirimphos-ethyl	mg/kg	0.5																					-	<0.5	-	-	-	-
Prothiofos	mg/kg	0.5																					-	<0.5	-	-	-	-

Lab Report Number																					EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																					HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																					TP04	TP04	TP04	TP04	TP05	TP05
Depth																					0.1	0.5	1	3	0.1	0.5
Date																					31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Polychlorinated Biphenyls (PCBs)																										
PCBs (Sum of total)	mg/kg	0.1												7[#9]							-	<0.1	-	-	-	-
PCBs (Sum of total)	µg/L	1																			-	-	-	-	-	-
Herbicides																										
Pronamide	mg/kg	0.5																			-	<0.5	-	-	-	-
Amino Aliphatics																										
N-nitrosodiethylamine	mg/kg	0.5																			-	<0.5	-	-	-	-
N-nitrosodi-n-butylamine	mg/kg	0.5																			-	<0.5	-	-	-	-
N-nitrosodi-n-propylamine	mg/kg	0.5																			-	<0.5	-	-	-	-
N-Nitrosomethylethylamine	mg/kg	0.5																			-	<0.5	-	-	-	-
Amino Aromatics																										
1-naphthylamine	mg/kg	0.5																			-	<0.5	-	-	-	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																			-	<1.0	-	-	-	-
Anilines																										
2-nitroaniline	mg/kg	1																			-	<1.0	-	-	-	-
3-nitroaniline	mg/kg	1																			-	<1.0	-	-	-	-
4-chloroaniline	mg/kg	0.5																			-	<0.5	-	-	-	-
4-nitroaniline	mg/kg	0.5																			-	<0.5	-	-	-	-
2-methyl-5-nitroaniline	mg/kg	0.5																			-	<0.5	-	-	-	-
Aniline	mg/kg	0.5																			-	<0.5	-	-	-	-
Nitroaromatics																										
2-Picoline	mg/kg	0.5																			-	<0.5	-	-	-	-
4-aminobiphenyl	mg/kg	0.5																			-	<0.5	-	-	-	-
Pentachloronitrobenzene	mg/kg	0.5																			-	<0.5	-	-	-	-
Explosives																										
1,3,5-Trinitrobenzene	mg/kg	0.5																			-	<0.5	-	-	-	-
2,4-Dinitrotoluene	mg/kg	1																			-	<1.0	-	-	-	-
2,6-dinitrotoluene	mg/kg	1																			-	<1.0	-	-	-	-
Nitrobenzene	mg/kg	0.5																			-	<0.5	-	-	-	-
Acid Sulfate Soils - Acid Base Accounting																										
Net Acidity (acidity units)	mole H+/t	10																			-	-	-	-	-	-
Net Acidity (sulfur units)	%S	0.02																			-	-	-	-	-	-
Acid Sulfate Soils - Acidity Trail																										
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																				-	-	-	-	-	-
Titratable Actual Acidity (sulfur units)	%S	0.02																			-	-	-	-	-	-
Titratable Peroxide Acidity (sulfur units)	%S	0.02																			-	-	-	-	-	-
Titratable Actual Acidity	mole H+/t	2																			-	-	-	-	-	-
Titratable Sulfidic Acidity	moles H+/t	2																			-	-	-	-	-	-
Acid Sulfate Soils - ANC																										
ANC Fineness Factor	-	0.5																			-	-	-	-	-	-
Net Acidity excluding ANC (sulfur units)	% S	0.02																			-	-	-	-	-	-
Acid Sulfate Soils - Calcium Values																										
Acid Reacted Calcium	% Ca	0.02																			-	-	-	-	-	-
acidity - Acid Reacted Calcium	mole H+/t	10																			-	-	-	-	-	-
Calcium in Peroxide	%	0.02																			-	-	-	-	-	-
KCl Extractable Calcium	%	0.02																			-	-	-	-	-	-
Acid Sulfate Soils - CRS																										
pH (KCl)	pH units	0.1																			-	-	-	-	-	-

	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP04-C-0.1	HB-TP04-C-0.5	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
Location Code																						TP04	TP04	TP04	TP04	TP05	TP05
Depth																						0.1	0.5	1	3	0.1	0.5
Date																						31/01/2022	31/01/2022	31/01/2022	31/01/2022	28/01/2022	28/01/2022
Acid Sulfate Soils - Field																											
Reaction Rate	-	1																				-	-	-	-	-	-
pH (F)	pH Units	0.1																				-	-	-	-	-	-
pHFox	pH Units	0.1																				-	-	-	-	-	-
Acid Sulfate Soils - Liming Rate																											
Liming Rate	kg CaCO3/t	1																				-	-	-	-	-	-
Liming Rate excluding ANC	kg CaCO3/t	1																				-	-	-	-	-	-
Acid Sulfate Soils - Magnesium Values																											
Acid Reacted Magnesium	% Mg	0.02																				-	-	-	-	-	-
Acid Reacted Magnesium (acidity units)	mole H+/t	10																				-	-	-	-	-	-
KCl Extractable Magnesium	%	0.02																				-	-	-	-	-	-
Magnesium in Peroxide	%	0.02																				-	-	-	-	-	-
Acid Reacted Magnesium (sulfur units)	%S	0.02																				-	-	-	-	-	-
Acid Sulfate Soils - pH																											
pH-OX	pH units	0.1																				-	-	-	-	-	-
Acid Sulfate Soils - Retained Acidity																											
HCl Extractable Sulfur	%S	0.02																				-	-	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																				-	-	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																				-	-	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																											
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-	-
KCl Extractable Sulfur	%	0.02																				-	-	-	-	-	-
Peroxide Oxidisable Sulfur	%	0.02																				-	-	-	-	-	-
Peroxide Sulfur	%	0.02																				-	-	-	-	-	-
SPOCAS																											
a-Net Acidity without ANCE_	mole H+/t	10	18																			-	-	-	-	-	-
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																				-	-	-	-	-	-
Titratable Peroxide Acidity	mole H+/t	2																				-	-	-	-	-	-
Asbestos																											
Organic Fibre	g/kg	0.1																				Yes	-	Yes	-	Yes	-
Synthetic Mineral Fibre	g/kg	0.1																				No	-	No	-	No	-
Approved Identifier	Comment																					U.DALKIN	-	U.DALKIN	-	U.DALKIN	-
Sample Weight	g	0.01																				52.1	-	39.1	-	536	-
Description	Comment																					1[#25]	-	1[#20]	-	1[#20]	-
Asbestos fibres	g/kg	0.1																				No	-	No	-	No	-
Asbestos (Trace)	Fibres	5																				No	-	No	-	No	-
Asbestos Type	Comment																					-	-	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																				TP05	TP06	TP06	TP06	TP07	TP07
Depth																				1	0.1	0.5	1	0.1	0.5
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Metals																									
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			-	-	-	<5	8	-
Arsenic (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Barium	mg/kg	10		300		30,000																-	-	-	10	200	-
Barium (filtered)	µg/L	100			35,000[#1]																	-	-	-	-	-	-
Beryllium	mg/kg	1		2		400								500								-	-	-	<1	<1	-
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	-	-	-	-	-
Boron	mg/kg	50												300,000								-	-	-	<50	<50	-
Boron (filtered)	µg/L	100																				-	-	-	-	-	-
Cadmium	mg/kg	1		3		400								900								-	-	-	<1	<1	-
Cadmium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																-	-	-	6	16	-
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000								-	-	-	<2	19	-
Cobalt (filtered)	µg/L	100			[#2]																	-	-	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			-	-	-	<5	23	-
Copper (filtered)	µg/L	100			10,000[#1]																	-	-	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			-	-	-	15	8	-
Lead (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000								-	-	-	54	1,640	-
Manganese (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								-	-	-	0.3	<0.1	-
Mercury (filtered)	µg/L	1			10[#1]																	-	-	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			-	-	-	3	39	-
Nickel (filtered)	µg/L	100			1,000[#1]																	-	-	-	-	-	-
Selenium	mg/kg	5		10		200								10,000								-	-	-	<5	<5	-
Selenium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	27	-	-
Titanium	mg/kg	10																				-	-	-	190	310	-
Titanium (filtered)	µg/L	100																				-	-	-	-	-	-
Vanadium	mg/kg	5																				-	-	-	6	13	-
Vanadium (filtered)	µg/L	100																				-	-	-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			-	-	-	20	31	-
Zinc (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Inorganics																									
Chloride	mg/kg	10																				-	-	-	<10	30	-
Cyanide Total	mg/kg	1		32		2,500																<1	<1	-	-	-	<1
	mg/L	0.004			1[#1]																	-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																				-	-	-	87	101	-
Silica (filtered)	mg/kg	1																				-	-	-	57	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				-	-	-	20	140	-
Sulphur as S (filtered)	mg/kg	10																				-	-	-	<10	-	-
Resistivity (Saturated Paste)																									
Resistivity	OHM.M	0.01																				-	-	-	115	99	-
Physiochemical parameters																									
pH of Leaching Fluid	pH Units	0.1																				-	-	-	-	-	-
Moisture Content	%	0.1																				20.0	19.2	-	12.9	9.0	8.2
pH (Lab)	pH Units	0.1																				-	-	-	9.0	7.8	-
pH (Final)	pH Units	0.1																				-	-	-	-	-	-
pH (Initial)	pH Units	0.1																				-	-	-	-	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	-	-	-
pH (after HCL)	pH Units	0.1																				-	-	-	-	-	-
TRH - NEPM 2013 Fractions																									
TRH >C6 - C10	mg/kg	10								[#4]				26,000								-	-	-	<10	<10	-
TRH >C10 - C16	mg/kg	50								[#4]				20,000								-	-	-	<50	<50	-
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500	-	-	-	<100	120	-
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000	-	-	-	<100	<100	-
TRH >C10 - C40 (Sum of total)	mg/kg	50																				-	-	-	<50	120	-
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	-	-	-	<10	<10	-
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	-	-	-	<50	<50	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																				TP05	TP06	TP06	TP06	TP07	TP07
Depth																				1	0.1	0.5	1	0.1	0.5
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
TPH - NEPM 1999 Fractions																									
TPH C6 - C9	mg/kg	10		65		1,000																	-	-	-	<10	<10	-
TPH C10 - C14	mg/kg	50																					-	-	-	<50	<50	-
TPH C15 - C28	mg/kg	100																					-	-	-	<100	<100	-
TPH C29-C36	mg/kg	100																					-	-	-	<100	<100	-
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000																	-	-	-	<50	<50	-
Polycyclic aromatic hydrocarbons (PAHs)																												
2-chloronaphthalene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
2-methylnaphthalene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
3-methylcholanthrene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Acenaphthene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Acenaphthylene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Acetophenone	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Anthracene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																					<1	<1	-	-	-	<1
Benzo(k)fluoranthene	mg/kg	0.5																					-	-	-	<0.5	<0.5	-
	µg/L	1																					-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																					-	-	-	<0.5	<0.5	-
	µg/L	1																					-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20																1.4[#16]	<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	0.5			0.5[#1]																		-	-	-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																					0.6	0.6	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	0.5																					-	-	-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																					1.2	1.2	-	1.2	1.2	1.2
Carbazole	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Chrysene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Fluoranthene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Fluorene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Phenanthrene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Pyrene	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]				<0.5	<0.5	-	<0.5	<0.5	<0.5
	µg/L	1																					-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]									<0.5	<0.5	-	<0.5	<0.5	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																		-	-	-	-	-	-

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion									
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
Lab Report Number																							EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																							HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																							TP05	TP06	TP06	TP06	TP07	TP07
Depth																							1	0.1	0.5	1	0.1	0.5
Date																							28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
Monocyclic Aromatic Hydrocarbons (MAHs)																												
1,2,4-trimethylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,3,5-trimethylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Isopropylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
n-butylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
n-propylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
p-isopropyltoluene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
sec-butylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
tert-butylbenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75			<0.2	<0.2	-	<0.2	<0.2	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135			<0.5	<0.5	-	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165			<0.5	<0.5	-	<0.5	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
Xylene (o)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180			-	-	<0.5	<0.5	-	
Total BTEX	mg/kg	0.2																					-	-	-	<0.2	<0.2	-
Chlorinated Hydrocarbons																												
1,1,1,2-tetrachloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,1,1-trichloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,1,2,2-tetrachloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,1,2-trichloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,1-dichloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,1-dichloroethene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,2,3-trichloropropane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,2-dibromo-3-chloropropane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,2-dichloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,2-dichloropropane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,3-dichloropropane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
2,2-dichloropropane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Bromodichloromethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Bromoform	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Carbon tetrachloride	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Chlorodibromomethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Chloroethane	mg/kg	5																					<5	<5	-	-	-	<5
Chloroform	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Chloromethane	mg/kg	5																					<5	<5	-	-	-	<5
cis-1,2-dichloroethene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
cis-1,3-dichloropropene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
trans-1,3-dichloropropene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Dibromomethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Hexachlorobutadiene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Hexachlorocyclopentadiene	mg/kg	2.5																					<2.5	<2.5	-	-	-	<2.5
Hexachloroethane	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Trichloroethene (TCE)	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Tetrachloroethene (PCE)	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Vinyl chloride	mg/kg	5																					<5	<5	-	-	-	<5
Halogenated Benzenes																												
1,2,3-trichlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,2,4-trichlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,2-dichlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,3-dichlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
1,4-dichlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
2-chlorotoluene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
4-chlorotoluene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Bromobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Chlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Hexachlorobenzene	mg/kg	0.05												80									<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																					-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																				TP05	TP06	TP06	TP06	TP07	TP07
Depth																				1	0.1	0.5	1	0.1	0.5
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Halogenated Hydrocarbons																									
1,2-dibromoethane	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Bromomethane	mg/kg	5																		<5	<5	-	-	-	<5
Dichlorodifluoromethane	mg/kg	5																		<5	<5	-	-	-	<5
Iodomethane	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Trichlorofluoromethane	mg/kg	5																		<5	<5	-	-	-	<5
Solvents																									
Methyl Ethyl Ketone	mg/kg	5																		<5	<5	-	-	-	<5
2-hexanone (MBK)	mg/kg	5																		<5	<5	-	-	-	<5
4-Methyl-2-pentanone	mg/kg	5																		<5	<5	-	-	-	<5
Carbon disulfide	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Isophorone	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Vinyl acetate	mg/kg	5																		<5	<5	-	-	-	<5
Volatile Organic Compounds (VOCs)																									
1,1-dichloropropene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
cis-1,4-Dichloro-2-butene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Pentachloroethane	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Styrene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
trans-1,4-Dichloro-2-butene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Semi Volatile Organic Compounds (SVOCs)																									
2-(acetylamino) fluorene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
3,3-Dichlorobenzidine	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
4-(dimethylamino) azobenzene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
4-bromophenyl phenyl ether	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
4-chlorophenyl phenyl ether	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
4-Nitroquinoline-N-oxide	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Azobenzene	mg/kg	1																		<1	<1	-	-	-	<1
Bis(2-chloroethoxy) methane	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Bis(2-chloroethyl)ether	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Dibenzofuran	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Hexachloropropene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Methapyrilene	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
N-nitrosomorpholine	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
N-nitrosopiperidine	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
N-nitrosopyrrolidine	mg/kg	1																		<1.0	<1.0	-	-	-	<1.0
Phenacetin	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Per- and Poly-fluoroalkyl Substances (PFAS)																									
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01											<0.0002	<0.0002	-	-	-	<0.0002
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10												<0.0002	<0.0002	-	-	-	<0.0002
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																		<0.0005	<0.0005	-	-	-	<0.0005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																		<0.0002	<0.0002	-	-	-	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																		<0.001	<0.001	-	-	-	<0.001

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																				TP05	TP06	TP06	TP06	TP07	TP07
Depth																				1	0.1	0.5	1	0.1	0.5
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																					<0.0002	<0.0002	-	-	-	<0.0002
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																					<0.0002	<0.0002	-	-	-	<0.0002
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																					<0.0002	<0.0002	-	-	-	<0.0002
Sum (PFHxS + PFOS)	mg/kg	0.0002					20																<0.0002	<0.0002	-	-	-	<0.0002
Sum of PFAS	µg/kg	0.2																					<0.2	<0.2	-	-	-	<0.2
(n:2) Fluorotelomer Sulfonic Acids																												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																					<0.0005	<0.0005	-	-	-	<0.0005
Phenols																												
2,4,5-trichlorophenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2-methylphenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	1																					-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
	µg/L	2																					-	-	-	-	-	-
Pentachlorophenol	mg/kg	1													660								<1	<1	-	-	-	<1
	µg/L	2																					-	-	-	-	-	-
Phenol	mg/kg	0.5													240,000								<0.5	<0.5	-	-	-	<0.5
Phenol	µg/L	1																					-	-	-	-	-	-
Phthalates																												
Bis(2-ethylhexyl) phthalate	mg/kg	5																					<5.0	<5.0	-	-	-	<5.0
Butyl benzyl phthalate	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Diethylphthalate	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Dimethyl phthalate	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5
Di-n-butyl phthalate	mg/kg	0.5																					1.3	<0.5	-	-	-	<0.5
Di-n-octyl phthalate	mg/kg	0.5																					<0.5	<0.5	-	-	-	<0.5

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Field ID																				HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																				TP05	TP06	TP06	TP06	TP07	TP07
Depth																				1	0.1	0.5	1	0.1	0.5
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Organochlorine Pesticides (OCPs)																									
4,4-DDE	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
a-BHC	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Aldrin	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45						<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5			3[#1]															-	-	-	-	-	-
b-BHC	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Chlordane	mg/kg	0.05												530						<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Chlordane (trans)	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
d-BHC	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
DDD	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
DDT	mg/kg	0.2																640[#11]		<0.2	<0.2	-	-	-	<0.2
	µg/L	2																		-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600						<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5			200[#1]															-	-	-	-	-	-
Chlorobenzilate	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Dieldrin	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Endosulfan	mg/kg	0.05												2,000						<0.05	<0.05	-	-	-	<0.05
Endosulfan I	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Endosulfan II	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Endosulfan sulfate	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Endrin	mg/kg	0.05												100						<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Endrin ketone	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Heptachlor	mg/kg	0.05												50						<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05																		<0.05	<0.05	-	-	-	<0.05
	µg/L	0.5																		-	-	-	-	-	-
Methoxychlor	mg/kg	0.2												2,500						<0.2	<0.2	-	-	-	<0.2
Methoxychlor	µg/L	2																		-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)																									
Chlorfenvinphos	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Chlorpyrifos	mg/kg	0.5												2,000						<0.5	<0.5	-	-	-	<0.5
Chlorpyrifos-methyl	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Diazinon	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Dichlorvos	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Dimethoate	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Ethion	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Fenthion	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Malathion	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Pirimphos-ethyl	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5
Prothiofos	mg/kg	0.5																		<0.5	<0.5	-	-	-	<0.5

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
Location Code																				TP05	TP06	TP06	TP06	TP07	TP07
Depth																				1	0.1	0.5	1	0.1	0.5
Date																				28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Polychlorinated Biphenyls (PCBs)																									
PCBs (Sum of total)	mg/kg	0.1												7[#9]								<0.1	<0.1	-	-	-	<0.1
PCBs (Sum of total)	µg/L	1																				-	-	-	-	-	-
Herbicides																									
Pronamide	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Amino Aliphatics																									
N-nitrosodiethylamine	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
N-nitrosodi-n-butylamine	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
N-nitrosodi-n-propylamine	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
N-Nitrosomethylethylamine	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Amino Aromatics																									
1-naphthylamine	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																				<1.0	<1.0	-	-	-	<1.0
Anilines																									
2-nitroaniline	mg/kg	1																				<1.0	<1.0	-	-	-	<1.0
3-nitroaniline	mg/kg	1																				<1.0	<1.0	-	-	-	<1.0
4-chloroaniline	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
4-nitroaniline	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
2-methyl-5-nitroaniline	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Aniline	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Nitroaromatics																									
2-Picoline	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
4-aminobiphenyl	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Pentachloronitrobenzene	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Explosives																									
1,3,5-Trinitrobenzene	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
2,4-Dinitrotoluene	mg/kg	1																				<1.0	<1.0	-	-	-	<1.0
2,6-dinitrotoluene	mg/kg	1																				<1.0	<1.0	-	-	-	<1.0
Nitrobenzene	mg/kg	0.5																				<0.5	<0.5	-	-	-	<0.5
Acid Sulfate Soils - Acid Base Accounting																									
Net Acidity (acidity units)	mole H+/t	10																				-	-	<10	-	-	-
Net Acidity (sulfur units)	%S	0.02																				-	-	<0.02	-	-	-
Acid Sulfate Soils - Acidity Trail																									
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																					-	-	<0.020	-	-	-
Titratable Actual Acidity (sulfur units)	%S	0.02																				-	-	<0.020	-	-	-
Titratable Peroxide Acidity (sulfur units)	%S	0.02																				-	-	<0.020	-	-	-
Titratable Actual Acidity	mole H+/t	2																				-	-	<2	-	-	-
Titratable Sulfidic Acidity	moles H+/t	2																				-	-	<2	-	-	-
Acid Sulfate Soils - ANC																									
ANC Fineness Factor	-	0.5																				-	-	1.5	-	-	-
Net Acidity excluding ANC (sulfur units)	% S	0.02																				-	-	<0.02	-	-	-
Acid Sulfate Soils - Calcium Values																									
Acid Reacted Calcium	% Ca	0.02																				-	-	<0.020	-	-	-
acidity - Acid Reacted Calcium	mole H+/t	10																				-	-	<10	-	-	-
Calcium in Peroxide	%	0.02																				-	-	0.041	-	-	-
KCl Extractable Calcium	%	0.02																				-	-	0.041	-	-	-
Acid Sulfate Soils - CRS																									
pH (KCl)	pH units	0.1																				-	-	5.7	-	-	-

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										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m		Lab Report Number	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
																							Field ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1	HB-TP07-C-0.5
																							Location Code	TP05	TP06	TP06	TP06	TP07	TP07
																							Depth	1	0.1	0.5	1	0.1	0.5
																							Date	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022	28/01/2022
Acid Sulfate Soils - Field																													
Reaction Rate	-	1																					-	-	2	-	-	-
pH (F)	pH Units	0.1																					-	-	5.6	-	-	-
pHFox	pH Units	0.1																					-	-	3.0	-	-	-
Acid Sulfate Soils - Liming Rate																													
Liming Rate	kg CaCO3/t	1																					-	-	<1	-	-	-
Liming Rate excluding ANC	kg CaCO3/t	1																					-	-	<1	-	-	-
Acid Sulfate Soils - Magnesium Values																													
Acid Reacted Magnesium	% Mg	0.02																					-	-	<0.020	-	-	-
Acid Reacted Magnesium (acidity units)	mole H+/t	10																					-	-	<10	-	-	-
KCl Extractable Magnesium	%	0.02																					-	-	<0.020	-	-	-
Magnesium in Peroxide	%	0.02																					-	-	<0.020	-	-	-
Acid Reacted Magnesium (sulfur units)	%S	0.02																					-	-	<0.020	-	-	-
Acid Sulfate Soils - pH																													
pH-OX	pH units	0.1																					-	-	4.5	-	-	-
Acid Sulfate Soils - Retained Acidity																													
HCl Extractable Sulfur	%S	0.02																					-	-	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																					-	-	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																					-	-	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																					-	-	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																													
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																					-	-	<10	-	-	-
KCl Extractable Sulfur	%	0.02																					-	-	<0.020	-	-	-
Peroxide Oxidisable Sulfur	%	0.02																					-	-	<0.020	-	-	-
Peroxide Sulfur	%	0.02																					-	-	<0.020	-	-	-
SPOCAS																													
a-Net Acidity without ANCE_	mole H+/t	10	18																				-	-	<10	-	-	-
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																					-	-	<12	-	-	-
Titratable Peroxide Acidity	mole H+/t	2																					-	-	<2	-	-	-
Asbestos																													
Organic Fibre	g/kg	0.1																					Yes	Yes	Yes	-	Yes	-
Synthetic Mineral Fibre	g/kg	0.1																					No	No	No	-	No	-
Approved Identifier	Comment																						U.DALKIN	U.DALKIN	U.DALKIN	-	U.DALKIN	-
Sample Weight	g	0.01																					427	414	521	-	400	-
Description	Comment																						1 [#25]	1 [#25]	1 [#20]	-	1 [#25]	-
Asbestos fibres	g/kg	0.1																					No	No	No	-	No	-
Asbestos (Trace)	Fibres	5																					No	No	No	-	No	-
Asbestos Type	Comment																						-	-	-	-	-	-

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																				TP07	TP08	TP08	TP08	TP08	TP09
Depth																				1	0.1	0.5	1	3	0.1
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Metals																									
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			-	-	<5	-	-	-
Arsenic (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Barium	mg/kg	10		300		30,000																-	-	10	-	-	-
Barium (filtered)	µg/L	100			35,000[#1]																	-	-	-	-	-	-
Beryllium	mg/kg	1		2		400								500								-	-	<1	-	-	-
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	-	-	-	-	-
Boron	mg/kg	50												300,000								-	-	<50	-	-	-
Boron (filtered)	µg/L	100																				-	-	-	-	-	-
Cadmium	mg/kg	1		3		400								900								-	-	<1	-	-	-
Cadmium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																-	-	11	-	-	-
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Cobalt	mg/kg	2		100		1,000								4,000								-	-	<2	-	-	-
Cobalt (filtered)	µg/L	100			[#2]																	-	-	-	-	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			-	-	38	-	-	-
Copper (filtered)	µg/L	100			10,000[#1]																	-	-	-	-	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			-	-	<5	-	-	-
Lead (filtered)	µg/L	100			500[#1]																	-	-	-	-	-	-
Manganese	mg/kg	5		500		25,000								60,000								-	-	7	-	-	-
Manganese (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								-	-	<0.1	-	-	-
Mercury (filtered)	µg/L	1			10[#1]																	-	-	-	-	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			-	-	4	-	-	-
Nickel (filtered)	µg/L	100			1,000[#1]																	-	-	-	-	-	-
Selenium	mg/kg	5		10		200								10,000								-	-	<5	-	-	-
Selenium (filtered)	µg/L	50			100[#1]																	-	-	-	-	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	-	-	-
Titanium	mg/kg	10																				-	-	30	-	-	-
Titanium (filtered)	µg/L	100																				-	-	-	-	-	-
Vanadium	mg/kg	5																				-	-	10	-	-	-
Vanadium (filtered)	µg/L	100																				-	-	-	-	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			-	-	8	-	-	-
Zinc (filtered)	µg/L	100			25,000[#1]																	-	-	-	-	-	-
Inorganics																									
Chloride	mg/kg	10																				-	-	-	-	30	-
Cyanide Total	mg/kg	1		32		2,500																-	-	-	<1	-	<1
	mg/L	0.004			1[#1]																	-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1																				-	-	-	-	39	-
Silica (filtered)	mg/kg	1																				-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				-	-	-	-	50	-
Sulphur as S (filtered)	mg/kg	10																				-	-	-	-	-	-
Resistivity (Saturated Paste)																									
Resistivity	OHM.M	0.01																				-	-	-	-	256	-
Physiochemical parameters																									
pH of Leaching Fluid	pH Units	0.1																				-	-	-	-	-	-
Moisture Content	%	0.1																				-	-	14.4	48.9	28.6	12.9
pH (Lab)	pH Units	0.1																				-	-	-	-	5.2	-
pH (Final)	pH Units	0.1																				-	-	-	-	-	-
pH (Initial)	pH Units	0.1																				-	-	-	-	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	-	-	-
pH (after HCL)	pH Units	0.1																				-	-	-	-	-	-
TRH - NEPM 2013 Fractions																									
TRH >C6 - C10	mg/kg	10								[#4]				26,000								-	-	<10	-	-	-
TRH >C10 - C16	mg/kg	50								[#4]				20,000								-	-	<50	-	-	-
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500	-	-	<100	-	-	-
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000	-	-	<100	-	-	-
TRH >C10 - C40 (Sum of total)	mg/kg	50																				-	-	<50	-	-	-
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	-	-	<10	-	-	-
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	-	-	<50	-	-	-

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Field ID																					HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																					TP07	TP08	TP08	TP08	TP08	TP09
Depth																					1	0.1	0.5	1	3	0.1
Date																					28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
TPH - NEPM 1999 Fractions																										
TPH C6 - C9	mg/kg	10		65		1,000															-	-	<10	-	-	-
TPH C10 - C14	mg/kg	50																			-	-	<50	-	-	-
TPH C15 - C28	mg/kg	100																			-	-	<100	-	-	-
TPH C29-C36	mg/kg	100																			-	-	<100	-	-	-
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000															-	-	<50	-	-	-
Polycyclic aromatic hydrocarbons (PAHs)																										
2-chloronaphthalene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
2-methylnaphthalene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
3-methylcholanthrene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Acenaphthene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Acenaphthylene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Acetophenone	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Anthracene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																			-	-	-	<1	-	<1
Benzo(k)fluoranthene	mg/kg	0.5																			-	-	<0.5	-	-	-
	µg/L	1																			-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																			-	-	<0.5	-	-	-
	µg/L	1																			-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20														1.4[#16]	-	-	<0.5	<0.5	-	<0.5
	µg/L	0.5			0.5[#1]																-	-	-	-	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																			-	-	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	0.5																			-	-	-	-	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																			-	-	1.2	1.2	-	1.2
Carbazole	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Chrysene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Fluoranthene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Fluorene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Phenanthrene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Pyrene	mg/kg	0.5																			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]					370[#11]			-	-	<0.5	<0.5	-	<0.5
	µg/L	1																			-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]							-	-	<0.5	<0.5	-	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																-	-	-	-	-	-

Lab Report Number																							EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																							HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																							TP07	TP08	TP08	TP08	TP08	TP09
Depth																							1	0.1	0.5	1	3	0.1
Date																							28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Monocyclic Aromatic Hydrocarbons (MAHs)																											
1,2,4-trimethylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,3,5-trimethylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Isopropylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
n-butylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
n-propylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
p-isopropyltoluene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
sec-butylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
tert-butylbenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75			-	-	<0.2	<0.2	-	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135			-	-	<0.5	<0.5	-	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165			-	-	<0.5	<0.5	-	<0.5
Xylene (m & p)	mg/kg	0.5																					-	-	<0.5	<0.5	-	<0.5
Xylene (o)	mg/kg	0.5																					-	-	<0.5	<0.5	-	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180			-	-	<0.5	-	-	-
Total BTEX	mg/kg	0.2																					-	-	<0.2	-	-	-
Chlorinated Hydrocarbons																												
1,1,1,2-tetrachloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,1,1-trichloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,1,2,2-tetrachloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,1,2-trichloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,1-dichloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,1-dichloroethene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,2,3-trichloropropane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,2-dibromo-3-chloropropane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,2-dichloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,2-dichloropropane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,3-dichloropropane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
2,2-dichloropropane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Bromodichloromethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Bromoform	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Carbon tetrachloride	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Chlorodibromomethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Chloroethane	mg/kg	5																					-	-	-	<5	-	<5
Chloroform	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Chloromethane	mg/kg	5																					-	-	-	<5	-	<5
cis-1,2-dichloroethene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
cis-1,3-dichloropropene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
trans-1,3-dichloropropene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Dibromomethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Hexachlorobutadiene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Hexachlorocyclopentadiene	mg/kg	2.5																					-	-	-	<2.5	-	<2.5
Hexachloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Trichloroethene (TCE)	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Tetrachloroethene (PCE)	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Vinyl chloride	mg/kg	5																					-	-	-	<5	-	<5
Halogenated Benzenes																												
1,2,3-trichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,2,4-trichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,2-dichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,3-dichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
1,4-dichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
2-chlorotoluene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
4-chlorotoluene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Bromobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Chlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Hexachlorobenzene	mg/kg	0.05												80									-	-	-	<0.05	-	<0.05
	µg/L	0.5																					-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion								
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial			
Lab Report Number																							EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																							HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																							TP07	TP08	TP08	TP08	TP08	TP09
Depth																							1	0.1	0.5	1	3	0.1
Date																							28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Halogenated Hydrocarbons																												
1,2-dibromoethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Bromomethane	mg/kg	5																					-	-	-	<5	-	<5
Dichlorodifluoromethane	mg/kg	5																					-	-	-	<5	-	<5
Iodomethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Trichlorofluoromethane	mg/kg	5																					-	-	-	<5	-	<5
Solvents																												
Methyl Ethyl Ketone	mg/kg	5																					-	-	-	<5	-	<5
2-hexanone (MBK)	mg/kg	5																					-	-	-	<5	-	<5
4-Methyl-2-pentanone	mg/kg	5																					-	-	-	<5	-	<5
Carbon disulfide	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Isophorone	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Vinyl acetate	mg/kg	5																					-	-	-	<5	-	<5
Volatile Organic Compounds (VOCs)																												
1,1-dichloropropene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
cis-1,4-Dichloro-2-butene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Pentachloroethane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Styrene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
trans-1,4-Dichloro-2-butene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Semi Volatile Organic Compounds (SVOCs)																												
2-(acetylamino) fluorene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
3,3-Dichlorobenzidine	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
4-(dimethylamino) azobenzene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
4-bromophenyl phenyl ether	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
4-chlorophenyl phenyl ether	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
4-Nitroquinoline-N-oxide	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Azobenzene	mg/kg	1																					-	-	-	<1	-	<1
Bis(2-chloroethoxy) methane	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Bis(2-chloroethyl)ether	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Dibenzofuran	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Hexachloropropene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Methapyrilene	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
N-nitrosomorpholine	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
N-nitrosopiperidine	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
N-nitrosopyrrolidine	mg/kg	1																					-	-	-	<1.0	-	<1.0
Phenacetin	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Per- and Poly-fluoroalkyl Substances (PFAS)																												
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01														-	-	-	<0.0002	-	<0.0002
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10															-	-	-	<0.0002	-	<0.0002
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																					-	-	-	<0.001	-	<0.001

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																				TP07	TP08	TP08	TP08	TP08	TP09
Depth																				1	0.1	0.5	1	3	0.1
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																					-	-	-	<0.0002	-	<0.0002
Sum (PFHxS + PFOS)	mg/kg	0.0002					20																-	-	-	<0.0002	-	<0.0002
Sum of PFAS	µg/kg	0.2																					-	-	-	<0.2	-	<0.2
(n:2) Fluorotelomer Sulfonic Acids																												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																					-	-	-	<0.0005	-	<0.0005
Phenols																												
2,4,5-trichlorophenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2-methylphenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	1																					-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
	µg/L	2																					-	-	-	-	-	-
Pentachlorophenol	mg/kg	1													660								-	-	-	<1	-	<1
	µg/L	2																					-	-	-	-	-	-
Phenol	mg/kg	0.5													240,000								-	-	-	<0.5	-	<0.5
Phenol	µg/L	1																					-	-	-	-	-	-
Phthalates																												
Bis(2-ethylhexyl) phthalate	mg/kg	5																					-	-	-	<5.0	-	<5.0
Butyl benzyl phthalate	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Diethylphthalate	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Dimethyl phthalate	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Di-n-butyl phthalate	mg/kg	0.5																					-	-	-	<0.5	-	<0.5
Di-n-octyl phthalate	mg/kg	0.5																					-	-	-	<0.5	-	<0.5

Lab Report Number																				EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																				HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																				TP07	TP08	TP08	TP08	TP08	TP09
Depth																				1	0.1	0.5	1	3	0.1
Date																				28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Organochlorine Pesticides (OCPs)																									
4,4-DDE	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
a-BHC	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Aldrin	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45							-	-	-	<0.05	-	<0.05
	µg/L	0.5			3[#1]																-	-	-	-	-	-
b-BHC	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Chlordane	mg/kg	0.05												530							-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Chlordane (trans)	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
d-BHC	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
DDD	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
DDT	mg/kg	0.2																	640[#11]		-	-	-	<0.2	-	<0.2
	µg/L	2																			-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600							-	-	-	<0.05	-	<0.05
	µg/L	0.5			200[#1]																-	-	-	-	-	-
Chlorobenzilate	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Dieldrin	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan	mg/kg	0.05												2,000							-	-	-	<0.05	-	<0.05
Endosulfan I	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan II	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endosulfan sulfate	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endrin	mg/kg	0.05												100							-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Endrin ketone	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor	mg/kg	0.05												50							-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05																			-	-	-	<0.05	-	<0.05
	µg/L	0.5																			-	-	-	-	-	-
Methoxychlor	mg/kg	0.2												2,500							-	-	-	<0.2	-	<0.2
Methoxychlor	µg/L	2																			-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)																										
Chlorfenvinphos	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Chlorpyrifos	mg/kg	0.5												2,000							-	-	-	<0.5	-	<0.5
Chlorpyrifos-methyl	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Diazinon	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Dichlorvos	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Dimethoate	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Ethion	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Fenthion	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Malathion	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Pirimphos-ethyl	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Prothiofos	mg/kg	0.5																			-	-	-	<0.5	-	<0.5

										CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)					NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion									
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	>=0m, <2m	>=2m, <4m	>=4m	CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
Lab Report Number																					EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																					HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																					TP07	TP08	TP08	TP08	TP08	TP09
Depth																					1	0.1	0.5	1	3	0.1
Date																					28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Polychlorinated Biphenyls (PCBs)																										
PCBs (Sum of total)	mg/kg	0.1												7[#9]							-	-	-	<0.1	-	<0.1
PCBs (Sum of total)	µg/L	1																			-	-	-	-	-	-
Herbicides																										
Pronamide	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Amino Aliphatics																										
N-nitrosodiethylamine	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
N-nitrosodi-n-butylamine	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
N-nitrosodi-n-propylamine	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
N-Nitrosomethylethylamine	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Amino Aromatics																										
1-naphthylamine	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																			-	-	-	<1.0	-	<1.0
Anilines																										
2-nitroaniline	mg/kg	1																			-	-	-	<1.0	-	<1.0
3-nitroaniline	mg/kg	1																			-	-	-	<1.0	-	<1.0
4-chloroaniline	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
4-nitroaniline	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
2-methyl-5-nitroaniline	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Aniline	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Nitroaromatics																										
2-Picoline	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
4-aminobiphenyl	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Pentachloronitrobenzene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Explosives																										
1,3,5-Trinitrobenzene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
2,4-Dinitrotoluene	mg/kg	1																			-	-	-	<1.0	-	<1.0
2,6-dinitrotoluene	mg/kg	1																			-	-	-	<1.0	-	<1.0
Nitrobenzene	mg/kg	0.5																			-	-	-	<0.5	-	<0.5
Acid Sulfate Soils - Acid Base Accounting																										
Net Acidity (acidity units)	mole H+/t	10																			-	-	-	-	-	-
Net Acidity (sulfur units)	%S	0.02																			-	-	-	-	-	-
Acid Sulfate Soils - Acidity Trail																										
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																				-	-	-	-	-	-
Titratable Actual Acidity (sulfur units)	%S	0.02																			-	-	-	-	-	-
Titratable Peroxide Acidity (sulfur units)	%S	0.02																			-	-	-	-	-	-
Titratable Actual Acidity	mole H+/t	2																			-	-	-	-	-	-
Titratable Sulfidic Acidity	moles H+/t	2																			-	-	-	-	-	-
Acid Sulfate Soils - ANC																										
ANC Fineness Factor	-	0.5																			-	-	-	-	-	-
Net Acidity excluding ANC (sulfur units)	% S	0.02																			-	-	-	-	-	-
Acid Sulfate Soils - Calcium Values																										
Acid Reacted Calcium	% Ca	0.02																			-	-	-	-	-	-
acidity - Acid Reacted Calcium	mole H+/t	10																			-	-	-	-	-	-
Calcium in Peroxide	%	0.02																			-	-	-	-	-	-
KCl Extractable Calcium	%	0.02																			-	-	-	-	-	-
Acid Sulfate Soils - CRS																										
pH (KCl)	pH units	0.1																			-	-	-	-	-	-

Lab Report Number																						EM2202101	EM2202101	EM2202101	EM2202101	EM2202101	EM2202101
Field ID																						HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1	HB-TP08-C-3	HB-TP09-C-0.1
Location Code																						TP07	TP08	TP08	TP08	TP08	TP09
Depth																						1	0.1	0.5	1	3	0.1
Date																						28/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial						
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m						
Acid Sulfate Soils - Field																											
Reaction Rate	-	1																				-	-	-	-	-	-
pH (F)	pH Units	0.1																				-	-	-	-	-	-
pHFox	pH Units	0.1																				-	-	-	-	-	-
Acid Sulfate Soils - Liming Rate																											
Liming Rate	kg CaCO3/t	1																				-	-	-	-	-	-
Liming Rate excluding ANC	kg CaCO3/t	1																				-	-	-	-	-	-
Acid Sulfate Soils - Magnesium Values																											
Acid Reacted Magnesium	% Mg	0.02																				-	-	-	-	-	-
Acid Reacted Magnesium (acidity units)	mole H+/t	10																				-	-	-	-	-	-
KCl Extractable Magnesium	%	0.02																				-	-	-	-	-	-
Magnesium in Peroxide	%	0.02																				-	-	-	-	-	-
Acid Reacted Magnesium (sulfur units)	%S	0.02																				-	-	-	-	-	-
Acid Sulfate Soils - pH																											
pH-OX	pH units	0.1																				-	-	-	-	-	-
Acid Sulfate Soils - Retained Acidity																											
HCl Extractable Sulfur	%S	0.02																				-	-	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																				-	-	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																				-	-	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																											
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-	-
KCl Extractable Sulfur	%	0.02																				-	-	-	-	-	-
Peroxide Oxidisable Sulfur	%	0.02																				-	-	-	-	-	-
Peroxide Sulfur	%	0.02																				-	-	-	-	-	-
SPOCAS																											
a-Net Acidity without ANCE_	mole H+/t	10	18																			-	-	-	-	-	-
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																				-	-	-	-	-	-
Titratable Peroxide Acidity	mole H+/t	2																				-	-	-	-	-	-
Asbestos																											
Organic Fibre	g/kg	0.1																				Yes	Yes	-	-	-	No
Synthetic Mineral Fibre	g/kg	0.1																				No	No	-	-	-	No
Approved Identifier	Comment																					U.DALKIN	U.DALKIN	-	-	-	U.DALKIN
Sample Weight	g	0.01																				523	30.4	-	-	-	67.3
Description	Comment																					1[#24]	1[#20]	-	-	-	1[#26]
Asbestos fibres	g/kg	0.1																				No	No	-	-	-	No
Asbestos (Trace)	Fibres	5																				No	No	-	-	-	No
Asbestos Type	Comment																					-	-	-	-	-	-

Lab Report Number																				EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																				HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																				TP09	BH01	BH01	BH01	BH01
Depth																				1	0.1	0.1	0.5	2
Date																				31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial				
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Metals																								
Arsenic	mg/kg	5		20		750								3,000[#5]					160[#11]			<5	<5	-	-	<5
Arsenic (filtered)	µg/L	100			500[#1]																	-	<100	<100	-	-
Barium	mg/kg	10		300		30,000																<10	10	-	-	10
Barium (filtered)	µg/L	100			35,000[#1]																	-	<100	<100	-	-
Beryllium	mg/kg	1		2		400								500								<1	<1	-	-	<1
Beryllium (filtered)	µg/L	50			1,000[#1]																	-	<50	<50	-	-
Boron	mg/kg	50												300,000								<50	<50	-	-	<50
Boron (filtered)	µg/L	100																				-	<100	<100	-	-
Cadmium	mg/kg	1		3		400								900								<1	<1	-	-	<1
Cadmium (filtered)	µg/L	50			100[#1]																	-	<50	<50	-	-
Chromium (III+VI)	mg/kg	2		50		5,000																5	9	-	-	2
Chromium (III+VI) (filtered)	µg/L	100			500[#1]																	-	<100	<100	-	-
Cobalt	mg/kg	2		100		1,000								4,000								<2	16	-	-	<2
Cobalt (filtered)	µg/L	100			[#2]																	-	<100	<100	-	-
Copper	mg/kg	5		100		7,500								240,000					280[#12]			<5	23	-	-	<5
Copper (filtered)	µg/L	100			10,000[#1]																	-	<100	<100	-	-
Lead	mg/kg	5		300		3,000								1,500[#6]					1,800[#13]			<5	12	-	-	<5
Lead (filtered)	µg/L	100			500[#1]																	-	<100	<100	-	-
Manganese	mg/kg	5		500		25,000								60,000								<5	318	-	-	21
Manganese (filtered)	µg/L	100			25,000[#1]																	-	900	900	-	-
Mercury	mg/kg	0.1		1		110								730[#7]								<0.1	<0.1	-	-	<0.1
Mercury (filtered)	µg/L	1			10[#1]																	-	<1.0	<1.0	-	-
Nickel	mg/kg	2		60		3,000								6,000					460[#14]			<2	84	-	-	<2
Nickel (filtered)	µg/L	100			1,000[#1]																	-	<100	<100	-	-
Selenium	mg/kg	5		10		200								10,000								<5	<5	-	-	<5
Selenium (filtered)	µg/L	50			100[#1]																	-	<50	<50	-	-
Silicon (filtered)	mg/kg	1																				-	-	-	-	-
Titanium	mg/kg	10																				20	620	-	-	10
Titanium (filtered)	µg/L	100																				-	<100	<100	-	-
Vanadium	mg/kg	5																				8	10	-	-	<5
Vanadium (filtered)	µg/L	100																				-	<100	<100	-	-
Zinc	mg/kg	5		200		50,000								400,000					920[#15]			<5	41	-	-	<5
Zinc (filtered)	µg/L	100			25,000[#1]																	-	200	400	-	-
Inorganics																										
Chloride	mg/kg	10																				<10	-	-	<10	-
Cyanide Total	mg/kg	1		32		2,500																-	-	-	<1	-
	mg/L	0.004			1[#1]																	-	<0.004	<0.004	-	-
Electrical conductivity (lab)	uS/cm	1																				11	-	-	20	-
Silica (filtered)	mg/kg	1																				-	-	-	-	-
Sulfate as SO4 2-	mg/kg	10																				-	-	-	<50	-
Sulfate as SO4 2- (filtered)	mg/kg	10																				<10	-	-	-	-
Sulphur as S (filtered)	mg/kg	10																				-	-	-	-	-
Resistivity (Saturated Paste)																										
Resistivity	OHM.M	0.01																				909	-	-	500	-
Physiochemical parameters																										
pH of Leaching Fluid	pH Units	0.1																				-	5.0	-	-	-
Moisture Content	%	0.1																				14.6	14.4	-	10.9	19.0
pH (Lab)	pH Units	0.1																				5.5	-	-	-	-
pH (Final)	pH Units	0.1																				-	5.1	5.0	-	-
pH (Initial)	pH Units	0.1																				-	9.7	9.4	-	-
pH (CaCl2)	pH Units	0.1																				-	-	-	3.8	-
pH (after HCL)	pH Units	0.1																				-	1.1	1.9	-	-
TRH - NEPM 2013 Fractions																										
TRH >C6 - C10	mg/kg	10								[#4]				26,000								<10	<10	-	-	<10
TRH >C10 - C16	mg/kg	50								[#4]				20,000								<50	<50	-	-	<50
TRH >C16 - C34	mg/kg	100												27,000						1,700	3,500	<100	700	-	-	<100
TRH >C34 - C40	mg/kg	100												38,000						3,300	10,000	<100	1,210	-	-	<100
TRH >C10 - C40 (Sum of total)	mg/kg	50																				<50	1,910	-	-	<50
TRH >C6 - C10 less BTEX (F1)	mg/kg	10													260[#10]	370	630	[#4]		215	700	<10	<10	-	-	<10
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50													[#4]					170	1,000	<50	<50	-	-	<50

Lab Report Number																						EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																						HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																						TP09	BH01	BH01	BH01	BH01
Depth																						1	0.1	0.1	0.5	2
Date																						31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
TPH - NEPM 1999 Fractions																										
TPH C6 - C9	mg/kg	10		65		1,000																<10	<10	-	-	<10
TPH C10 - C14	mg/kg	50																				<50	<50	-	-	<50
TPH C15 - C28	mg/kg	100																				<100	240	-	-	<100
TPH C29-C36	mg/kg	100																				<100	810	-	-	<100
TPH C10 - C36 (Sum of total)	mg/kg	50		1,000		10,000																<50	1,050	-	-	<50
Polycyclic aromatic hydrocarbons (PAHs)																										
2-chloronaphthalene	mg/kg	0.5																				-	-	-	<0.5	-
2-methylnaphthalene	mg/kg	0.5																				-	-	-	<0.5	-
3-methylcholanthrene	mg/kg	0.5																				-	-	-	<0.5	-
7,12-dimethylbenz(a)anthracene	mg/kg	0.5																				-	-	-	<0.5	-
Acenaphthene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Acenaphthylene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Acetophenone	mg/kg	0.5																				-	-	-	<0.5	-
Anthracene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Benz(a)anthracene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Benzo(b+j+k)fluoranthene	mg/kg	1																				-	-	-	<1	-
Benzo(k)fluoranthene	mg/kg	0.5																				<0.5	<0.5	-	-	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Benzo(b+j)fluoranthene	mg/kg	0.5																				<0.5	<0.5	-	-	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Benzo(g,h,i)perylene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Benzo(a) pyrene	mg/kg	0.5		0.08		20															1.4[#16]	<0.5	<0.5	-	<0.5	<0.5
	µg/L	0.5			0.5[#1]																	-	<0.5	<0.5	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5																				0.6	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	0.5																				-	<0.5	<0.5	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5																				1.2	1.2	-	1.2	1.2
Carbazole	mg/kg	0.5																				-	-	-	<0.5	-
Chrysene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Dibenz(a,h)anthracene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Fluoranthene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Fluorene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Phenanthrene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Pyrene	mg/kg	0.5																				<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
Naphthalene	mg/kg	0.5								[#4]			11,000		[#4]				370[#11]			<0.5	<0.5	-	<0.5	<0.5
	µg/L	1																				-	<1.0	<1.0	-	-
PAHs (Sum of total)	mg/kg	0.5		20		200								4,000[#8]								<0.5	<0.5	-	<0.5	<0.5
PAHs (Sum of total)	µg/L	0.5			0.5[#3]																	-	<0.5	<0.5	-	-

Lab Report Number																							EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																							HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																							TP09	BH01	BH01	BH01	BH01
Depth																							1	0.1	0.1	0.5	2
Date																							31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Monocyclic Aromatic Hydrocarbons (MAHs)																											
1,2,4-trimethylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
1,3,5-trimethylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
Isopropylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
n-butylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
n-propylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
p-isopropyltoluene	mg/kg	0.5																					-	-	-	<0.5	-
sec-butylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
tert-butylbenzene	mg/kg	0.5																					-	-	-	<0.5	-
Benzene	mg/kg	0.2		1		50				77	160	#4	430		3	3	3	3		75			<0.2	<0.2	-	<0.2	<0.2
Toluene	mg/kg	0.5		1		1,000				#4			99,000		#4					135			<0.5	<0.5	-	<0.5	<0.5
Ethylbenzene	mg/kg	0.5		3		1,080				#4			27,000		#4					165			<0.5	<0.5	-	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5
Xylene (o)	mg/kg	0.5																					<0.5	<0.5	-	<0.5	<0.5
Xylene Total	mg/kg	0.5		14		1,800				#4			81,000		230	#4				180			<0.5	<0.5	-	-	<0.5
Total BTEX	mg/kg	0.2																					<0.2	<0.2	-	-	<0.2
Chlorinated Hydrocarbons																											
1,1,1,2-tetrachloroethane	mg/kg	0.5																					-	-	-	<0.5	-
1,1,1-trichloroethane	mg/kg	0.5																					-	-	-	<0.5	-
1,1,2,2-tetrachloroethane	mg/kg	0.5																					-	-	-	<0.5	-
1,1,2-trichloroethane	mg/kg	0.5																					-	-	-	<0.5	-
1,1-dichloroethane	mg/kg	0.5																					-	-	-	<0.5	-
1,1-dichloroethene	mg/kg	0.5																					-	-	-	<0.5	-
1,2,3-trichloropropane	mg/kg	0.5																					-	-	-	<0.5	-
1,2-dibromo-3-chloropropane	mg/kg	0.5																					-	-	-	<0.5	-
1,2-dichloroethane	mg/kg	0.5																					-	-	-	<0.5	-
1,2-dichloropropane	mg/kg	0.5																					-	-	-	<0.5	-
1,3-dichloropropane	mg/kg	0.5																					-	-	-	<0.5	-
2,2-dichloropropane	mg/kg	0.5																					-	-	-	<0.5	-
Bromodichloromethane	mg/kg	0.5																					-	-	-	<0.5	-
Bromoform	mg/kg	0.5																					-	-	-	<0.5	-
Carbon tetrachloride	mg/kg	0.5																					-	-	-	<0.5	-
Chlorodibromomethane	mg/kg	0.5																					-	-	-	<0.5	-
Chloroethane	mg/kg	5																					-	-	-	<5	-
Chloroform	mg/kg	0.5																					-	-	-	<0.5	-
Chloromethane	mg/kg	5																					-	-	-	<5	-
cis-1,2-dichloroethene	mg/kg	0.5																					-	-	-	<0.5	-
cis-1,3-dichloropropene	mg/kg	0.5																					-	-	-	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.5																					-	-	-	<0.5	-
trans-1,3-dichloropropene	mg/kg	0.5																					-	-	-	<0.5	-
Dibromomethane	mg/kg	0.5																					-	-	-	<0.5	-
Hexachlorobutadiene	mg/kg	0.5																					-	-	-	<0.5	-
Hexachlorocyclopentadiene	mg/kg	2.5																					-	-	-	<2.5	-
Hexachloroethane	mg/kg	0.5																					-	-	-	<0.5	-
Trichloroethene (TCE)	mg/kg	0.5																					-	-	-	<0.5	-
Tetrachloroethene (PCE)	mg/kg	0.5																					-	-	-	<0.5	-
Vinyl chloride	mg/kg	5																					-	-	-	<5	-
Halogenated Benzenes																											
1,2,3-trichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-
1,2,4-trichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-
1,2-dichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-
1,3-dichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-
1,4-dichlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-
2-chlorotoluene	mg/kg	0.5																					-	-	-	<0.5	-
4-chlorotoluene	mg/kg	0.5																					-	-	-	<0.5	-
Bromobenzene	mg/kg	0.5																					-	-	-	<0.5	-
Chlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-
Hexachlorobenzene	mg/kg	0.05												80									-	-	-	<1.0	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Pentachlorobenzene	mg/kg	0.5																					-	-	-	<0.5	-

Lab Report Number																							EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																							HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																							TP09	BH01	BH01	BH01	BH01
Depth																							1	0.1	0.1	0.5	2
Date																							31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Halogenated Hydrocarbons																											
1,2-dibromoethane	mg/kg	0.5																					-	-	-	<0.5	-
Bromomethane	mg/kg	5																					-	-	-	<5	-
Dichlorodifluoromethane	mg/kg	5																					-	-	-	<5	-
Iodomethane	mg/kg	0.5																					-	-	-	<0.5	-
Trichlorofluoromethane	mg/kg	5																					-	-	-	<5	-
Solvents																											
Methyl Ethyl Ketone	mg/kg	5																					-	-	-	<5	-
2-hexanone (MBK)	mg/kg	5																					-	-	-	<5	-
4-Methyl-2-pentanone	mg/kg	5																					-	-	-	<5	-
Carbon disulfide	mg/kg	0.5																					-	-	-	<0.5	-
Isophorone	mg/kg	0.5																					-	-	-	<0.5	-
Vinyl acetate	mg/kg	5																					-	-	-	<5	-
Volatile Organic Compounds (VOCs)																											
1,1-dichloropropene	mg/kg	0.5																					-	-	-	<0.5	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5																					-	-	-	<0.5	-
Pentachloroethane	mg/kg	0.5																					-	-	-	<0.5	-
Styrene	mg/kg	0.5																					-	-	-	<0.5	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5																					-	-	-	<0.5	-
Semi Volatile Organic Compounds (SVOCs)																											
2-(acetylamino) fluorene	mg/kg	0.5																					-	-	-	<0.5	-
3,3-Dichlorobenzidine	mg/kg	0.5																					-	-	-	<0.5	-
4-(dimethylamino) azobenzene	mg/kg	0.5																					-	-	-	<0.5	-
4-bromophenyl phenyl ether	mg/kg	0.5																					-	-	-	<0.5	-
4-chlorophenyl phenyl ether	mg/kg	0.5																					-	-	-	<0.5	-
4-Nitroquinoline-N-oxide	mg/kg	0.5																					-	-	-	<0.5	-
Azobenzene	mg/kg	1																					-	-	-	<1	-
Bis(2-chloroethoxy) methane	mg/kg	0.5																					-	-	-	<0.5	-
Bis(2-chloroethyl)ether	mg/kg	0.5																					-	-	-	<0.5	-
Dibenzofuran	mg/kg	0.5																					-	-	-	<0.5	-
Hexachloropropene	mg/kg	0.5																					-	-	-	<0.5	-
Methapyrilene	mg/kg	0.5																					-	-	-	<0.5	-
N-nitrosomorpholine	mg/kg	0.5																					-	-	-	<0.5	-
N-nitrosopiperidine	mg/kg	0.5																					-	-	-	<0.5	-
N-nitrosopyrrolidine	mg/kg	1																					-	-	-	<1.0	-
Phenacetin	mg/kg	0.5																					-	-	-	<0.5	-
Per- and Poly-fluoroalkyl Substances (PFAS)																											
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002						1	0.01														-	-	-	<0.0002	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002					50	10															-	-	-	<0.0002	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																					-	-	-	<0.0005	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																					-	-	-	<0.0002	-
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																					-	-	-	<0.001	-

Lab Report Number																						EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																						HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																						TP09	BH01	BH01	BH01	BH01
Depth																						1	0.1	0.1	0.5	2
Date																						31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002																				-	-	-	<0.0002	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005																				-	-	-	<0.0005	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005																				-	-	-	<0.0005	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005																				-	-	-	<0.0005	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005																				-	-	-	<0.0005	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002																				-	-	-	<0.0002	-
Sum of WA DWER PFAS (n=10)*	µg/kg	0.0002																				-	-	-	<0.0002	-
Sum (PFHxS + PFOS)	mg/kg	0.0002					20															-	-	-	<0.0002	-
Sum of PFAS	µg/kg	0.2																				-	-	-	<0.2	-
(n:2) Fluorotelomer Sulfonic Acids																										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005																				-	-	-	<0.0005	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005																				-	-	-	<0.0005	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																				-	-	-	<0.0005	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																				-	-	-	<0.0005	-
Phenols																										
2,4,5-trichlorophenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2,4,6-trichlorophenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2,4-dichlorophenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2,4-dimethylphenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2,6-dichlorophenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2-chlorophenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2-methylphenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
2-nitrophenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
4-chloro-3-methylphenol	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	1																				-	<1.0	<1.0	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5																				-	-	-	<0.5	-
	µg/L	2																				-	<2.0	<2.0	-	-
Pentachlorophenol	mg/kg	1													660							-	-	-	<1	-
	µg/L	2																				-	<2.0	<2.0	-	-
Phenol	mg/kg	0.5													240,000							-	-	-	<0.5	-
Phenol	µg/L	1																				-	<1.0	<1.0	-	-
Phthalates																										
Bis(2-ethylhexyl) phthalate	mg/kg	5																				-	-	-	<5.0	-
Butyl benzyl phthalate	mg/kg	0.5																				-	-	-	<0.5	-
Diethylphthalate	mg/kg	0.5																				-	-	-	<0.5	-
Dimethyl phthalate	mg/kg	0.5																				-	-	-	<0.5	-
Di-n-butyl phthalate	mg/kg	0.5																				-	-	-	<0.5	-
Di-n-octyl phthalate	mg/kg	0.5																				-	-	-	<0.5	-

Lab Report Number																							EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																							HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																							TP09	BH01	BH01	BH01	BH01
Depth																							1	0.1	0.1	0.5	2
Date																							31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Organochlorine Pesticides (OCPs)																											
4,4-DDE	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
a-BHC	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Aldrin	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Aldrin + Dieldrin	mg/kg	0.05		2		50								45									-	-	-	-	-
	µg/L	0.5			3[#1]																		-	<0.5	<0.5	-	-
b-BHC	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Chlordane	mg/kg	0.05												530									-	-	-	-	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Chlordane (cis)	mg/kg	0.05																					-	-	-	-	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Chlordane (trans)	mg/kg	0.05																					-	-	-	-	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
d-BHC	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
DDD	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
DDT	mg/kg	0.2																		640[#11]			-	-	-	<1.0	-
	µg/L	2																					-	<2.0	<2.0	-	-
DDT+DDE+DDD	mg/kg	0.05		2		1,000								3,600									-	-	-	-	-
	µg/L	0.5			200[#1]																		-	<0.5	<0.5	-	-
Chlorobenzilate	mg/kg	0.5																					-	-	-	<0.5	-
Dieldrin	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Endosulfan	mg/kg	0.05												2,000									-	-	-	-	-
Endosulfan I	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Endosulfan II	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Endosulfan sulfate	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Endrin	mg/kg	0.05												100									-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Endrin aldehyde	mg/kg	0.05																					-	-	-	-	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Endrin ketone	mg/kg	0.05																					-	-	-	-	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
g-BHC (Lindane)	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Heptachlor	mg/kg	0.05												50									-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Heptachlor epoxide	mg/kg	0.05																					-	-	-	<0.5	-
	µg/L	0.5																					-	<0.5	<0.5	-	-
Methoxychlor	mg/kg	0.2												2,500									-	-	-	-	-
Methoxychlor	µg/L	2																					-	<2.0	<2.0	-	-
Organophosphorous Pesticides (OPPs)																											
Chlorfenvinphos	mg/kg	0.5																					-	-	-	<0.5	-
Chlorpyrifos	mg/kg	0.5												2,000									-	-	-	<0.5	-
Chlorpyrifos-methyl	mg/kg	0.5																					-	-	-	<0.5	-
Diazinon	mg/kg	0.5																					-	-	-	<0.5	-
Dichlorvos	mg/kg	0.5																					-	-	-	<0.5	-
Dimethoate	mg/kg	0.5																					-	-	-	<0.5	-
Ethion	mg/kg	0.5																					-	-	-	<0.5	-
Fenthion	mg/kg	0.5																					-	-	-	<0.5	-
Malathion	mg/kg	0.5																					-	-	-	<0.5	-
Pirimphos-ethyl	mg/kg	0.5																					-	-	-	<0.5	-
Prothiofos	mg/kg	0.5																					-	-	-	<0.5	-

Lab Report Number																				EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																				HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																				TP09	BH01	BH01	BH01	BH01
Depth																				1	0.1	0.1	0.5	2
Date																				31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial / commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Polychlorinated Biphenyls (PCBs)																									
PCBs (Sum of total)	mg/kg	0.1												7[#9]								-	-	-	<0.1	-
PCBs (Sum of total)	µg/L	1																				-	<1	<1	-	-
Herbicides																									
Pronamide	mg/kg	0.5																				-	-	-	<0.5	-
Amino Aliphatics																									
N-nitrosodiethylamine	mg/kg	0.5																				-	-	-	<0.5	-
N-nitrosodi-n-butylamine	mg/kg	0.5																				-	-	-	<0.5	-
N-nitrosodi-n-propylamine	mg/kg	0.5																				-	-	-	<0.5	-
N-Nitrosomethylethylamine	mg/kg	0.5																				-	-	-	<0.5	-
Amino Aromatics																									
1-naphthylamine	mg/kg	0.5																				-	-	-	<0.5	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1																				-	-	-	<1.0	-
Anilines																									
2-nitroaniline	mg/kg	1																				-	-	-	<1.0	-
3-nitroaniline	mg/kg	1																				-	-	-	<1.0	-
4-chloroaniline	mg/kg	0.5																				-	-	-	<0.5	-
4-nitroaniline	mg/kg	0.5																				-	-	-	<0.5	-
2-methyl-5-nitroaniline	mg/kg	0.5																				-	-	-	<0.5	-
Aniline	mg/kg	0.5																				-	-	-	<0.5	-
Nitroaromatics																									
2-Picoline	mg/kg	0.5																				-	-	-	<0.5	-
4-aminobiphenyl	mg/kg	0.5																				-	-	-	<0.5	-
Pentachloronitrobenzene	mg/kg	0.5																				-	-	-	<0.5	-
Explosives																									
1,3,5-Trinitrobenzene	mg/kg	0.5																				-	-	-	<0.5	-
2,4-Dinitrotoluene	mg/kg	1																				-	-	-	<1.0	-
2,6-dinitrotoluene	mg/kg	1																				-	-	-	<1.0	-
Nitrobenzene	mg/kg	0.5																				-	-	-	<0.5	-
Acid Sulfate Soils - Acid Base Accounting																									
Net Acidity (acidity units)	mole H+/t	10																				-	-	-	-	-
Net Acidity (sulfur units)	%S	0.02																				-	-	-	-	-
Acid Sulfate Soils - Acidity Trail																									
Titratable Sulfidic Acidity (sulfur units)	% pyrite S																					-	-	-	-	-
Titratable Actual Acidity (sulfur units)	%S	0.02																				-	-	-	-	-
Titratable Peroxide Acidity (sulfur units)	%S	0.02																				-	-	-	-	-
Titratable Actual Acidity	mole H+/t	2																				-	-	-	-	-
Titratable Sulfidic Acidity	moles H+/t	2																				-	-	-	-	-
Acid Sulfate Soils - ANC																									
ANC Fineness Factor	-	0.5																				-	-	-	-	-
Net Acidity excluding ANC (sulfur units)	% S	0.02																				-	-	-	-	-
Acid Sulfate Soils - Calcium Values																									
Acid Reacted Calcium	% Ca	0.02																				-	-	-	-	-
acidity - Acid Reacted Calcium	mole H+/t	10																				-	-	-	-	-
Calcium in Peroxide	%	0.02																				-	-	-	-	-
KCl Extractable Calcium	%	0.02																				-	-	-	-	-
Acid Sulfate Soils - CRS																									
pH (KCl)	pH units	0.1																				-	-	-	-	-

	Unit	EQL	ASSMAC 1998 Action Criteria	EPA Tasmania IB105, Table 2, Fill Material (Lvl 1) Max Total Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max TCLP Leach Conc.	EPA Tasmania IB105, Table 2, Low Lvl Contam Soil (Lvl 2) Max Total Conc.	PFAS NEMP 2020 Table 2 Industrial/ commercial (HIL D)	PFAS NEMP 2020 Table 3 Ecological direct exposure	PFAS NEMP 2020 Table 3 Ecological indirect exposure	CRCCARE No.10 Table 3 HSL (Vapour Intrusion) Intrusive Maintenance Worker (Sand)			CRCCARE No.10 Table 4 HSL-D (direct contact) Comm./Ind.	NEPM 2013 Table 1A(1) HIL D Soil	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion				NEPM 2013 Table 1B(1-5) EIL Comm Ind Default (Aged)	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Comm Ind	NEPM 2013 Table 1B(7) ML, Coarse Soil, Commercial/Industrial					
										>=0m, <2m	>=2m, <4m	>=4m			>=0m, <1m	>=1m, <2m	>=2m, <4m	>=4m	>=0m, <2m	>=0m, <2m					
Lab Report Number																						EM2202101	EM2202619	EM2202619	EM2202619	EM2202619
Field ID																						HB-TP09-C-1	HB-BH01-C-0.1	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2
Location Code																						TP09	BH01	BH01	BH01	BH01
Depth																						1	0.1	0.1	0.5	2
Date																						31/01/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Acid Sulfate Soils - Field																										
Reaction Rate	-	1																				-	-	-	-	-
pH (F)	pH Units	0.1																				-	-	-	-	-
pHFox	pH Units	0.1																				-	-	-	-	-
Acid Sulfate Soils - Liming Rate																										
Liming Rate	kg CaCO3/t	1																				-	-	-	-	-
Liming Rate excluding ANC	kg CaCO3/t	1																				-	-	-	-	-
Acid Sulfate Soils - Magnesium Values																										
Acid Reacted Magnesium	% Mg	0.02																				-	-	-	-	-
Acid Reacted Magnesium (acidity units)	mole H+/t	10																				-	-	-	-	-
KCl Extractable Magnesium	%	0.02																				-	-	-	-	-
Magnesium in Peroxide	%	0.02																				-	-	-	-	-
Acid Reacted Magnesium (sulfur units)	%S	0.02																				-	-	-	-	-
Acid Sulfate Soils - pH																										
pH-OX	pH units	0.1																				-	-	-	-	-
Acid Sulfate Soils - Retained Acidity																										
HCl Extractable Sulfur	%S	0.02																				-	-	-	-	-
Net Acid Soluble Sulfur	%S	0.02																				-	-	-	-	-
Net Acid Soluble Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-
Net Acid Soluble Sulfur (sulfur units)	%S	0.02																				-	-	-	-	-
Acid Sulfate Soils - Sulfur Trail																										
Peroxide Oxidisable Sulfur (acidity units)	mole H+/t	10																				-	-	-	-	-
KCl Extractable Sulfur	%	0.02																				-	-	-	-	-
Peroxide Oxidisable Sulfur	%	0.02																				-	-	-	-	-
Peroxide Sulfur	%	0.02																				-	-	-	-	-
SPOCAS																										
a-Net Acidity without ANCE_	mole H+/t	10	18																			-	-	-	-	-
sulfidic - Acid Reacted Calcium	mole H+/t	12.474																				-	-	-	-	-
Titratable Peroxide Acidity	mole H+/t	2																				-	-	-	-	-
Asbestos																										
Organic Fibre	g/kg	0.1																				-	No	-	No	-
Synthetic Mineral Fibre	g/kg	0.1																				-	No	-	No	-
Approved Identifier	Comment																					-	U.DALKIN	-	U.DALKIN	-
Sample Weight	g	0.01																				-	42.7	-	27.5	-
Description	Comment																					-	1[#22]	-	1[#23]	-
Asbestos fibres	g/kg	0.1																				-	No	-	No	-
Asbestos (Trace)	Fibres	5																				-	No	-	No	-
Asbestos Type	Comment																					-	-	-	-	-

Project Marinus_Heybridge

				Lab Report Number	EM2202619	EM2202619	EM2202619	EM2202619	EM2202619
				Field ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Location Code	BH01	BH02	BH03	BH06	BH06
				Date	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
	Unit	**EQL**	PFAS NEMP 2020 Table 5 Interim Marine 95%	**ANZG (2018) Marine water 95% toxicant DGVs**					
Metals									
Arsenic (filtered)	µg/L	1			**26**	**7**	<1	**2**	<1
Barium (filtered)	µg/L	1			**54**	**8**	**7**	**25**	**16**
Beryllium (filtered)	µg/L	1			<1	<1	<1	<1	<1
Boron (filtered)	µg/L	50			<50	<50	<50	<50	**50**
Cadmium (filtered)	µg/L	0.1		**5.5**[#1]	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium (III+VI) (filtered)	µg/L	1			**5**	**4**	<1	<1	<1
Cobalt (filtered)	µg/L	1		**1**[#2]	**18**	**5**	**13**	**13**	**2**
Copper (filtered)	µg/L	1		**1.3**[#3]	<1	**8**	<1	**5**	**3**
Iron (filtered)	µg/L	50			**150,000**	**2,130**	**7,720**	**7,390**	<50
Lead (filtered)	µg/L	1		**4.4**[#4]	<1	<1	<1	<1	<1
Manganese (filtered)	µg/L	1			**494**	**130**	**231**	**61**	**229**
Mercury (filtered)	µg/L	0.1		**0.4**[#3]	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (filtered)	µg/L	1		**70**[#2]	**20**	**7**	**7**	**7**	**4**
Selenium (filtered)	µg/L	10			<10	<10	<10	<10	<10
Titanium (filtered)	µg/L	10			<10	**20**	<10	<10	<10
Vanadium (filtered)	µg/L	10		**100**[#2]	<10	<10	<10	<10	<10
Zinc (filtered)	µg/L	5		**15**[#3]	**50**	**34**	**22**	**57**	**48**
Inorganics									
Ammonia as N	mg/L	0.01		**0.91**[#5]	**0.54**	**0.08**	<0.01	<0.01	<0.01
Cyanide (Free)	mg/L	0.004			<0.004	<0.004	<0.004	<0.004	-
Cyanide Total	mg/L	0.004			<0.004	<0.004	<0.004	<0.004	-
Electrical conductivity (lab)	uS/cm	1			**1,610**	**882**	**371**	**367**	-
Kjeldahl Nitrogen Total	mg/L	0.1			**2.2**	**0.6**	**0.1**	**0.4**	**0.7**
Nitrate & Nitrite (as N)	mg/L	0.01			<0.01	**0.09**	**0.02**	<0.01	<0.01
Nitrate (as N)	mg/L	0.01			<0.01	**0.07**	**0.02**	<0.01	-
Nitrite (as N)	mg/L	0.01			<0.01	**0.02**	<0.01	<0.01	-
Nitrogen (Total)	mg/L	0.1			**2.2**	**0.7**	**0.1**	**0.4**	**0.7**
Sulphide	mg/L	0.1			<0.1	<0.1	<0.1	<0.1	-
Total Dissolved Solids	mg/L	10			**1,400**	**736**	**264**	**303**	-
Resistivity (Saturated Paste)									
Resistivity	OHM.M	0.01			**6.21**	**11.3**	**27**	**27.2**	-
Polycyclic aromatic hydrocarbons (PAHs)									
2-chloronaphthalene	µg/L	2			<2	<2	<2	<2	<2
2-methylnaphthalene	µg/L	2			<2	<2	<2	<2	<2
3-methylcholanthrene	µg/L	2			<2	<2	<2	<2	<2
7,12-dimethylbenz(a)anthracene	µg/L	2			<2	<2	<2	<2	<2
Acenaphthene	µg/L	2			<2	<2	<2	<2	<2
Acenaphthylene	µg/L	2			<2	<2	<2	<2	<2
Acetophenone	µg/L	2			<2	<2	<2	<2	<2
Anthracene	µg/L	2			<2	<2	<2	<2	<2
Benz(a)anthracene	µg/L	2			<2	<2	<2	<2	<2
Benzo(b+j+k)fluoranthene	µg/L	4			<4	<4	<4	<4	<4
Benzo(g,h,i)perylene	µg/L	2			<2	<2	<2	<2	<2
Benzo(a) pyrene	µg/L	2			<2	<2	<2	<2	<2
Benzo(a)pyrene TEQ calc (zero)	µg/L	2			<2	<2	<2	<2	<2
Carbazole	µg/L	2			<2	<2	<2	<2	<2
Chrysene	µg/L	2			<2	<2	<2	<2	<2
Dibenz(a,h)anthracene	µg/L	2			<2	<2	<2	<2	<2
Fluoranthene	µg/L	2			<2	<2	<2	<2	<2
Fluorene	µg/L	2			<2	<2	<2	<2	<2
Indeno(1,2,3-c,d)pyrene	µg/L	2			<2	<2	<2	<2	<2
Phenanthrene	µg/L	2			<2	<2	<2	<2	<2
Pyrene	µg/L	2			<2	<2	<2	<2	<2
Naphthalene	µg/L	2		**70**[#6]	<2	<2	<2	<2	<2
PAHs (Sum of total)	µg/L	2			<2	<2	<2	<2	<2
Monocyclic Aromatic Hydrocarbons (MAHs)									
1,2,4-trimethylbenzene	µg/L	5			<5	<5	<5	<5	<5
1,3,5-trimethylbenzene	µg/L	5			<5	<5	<5	<5	<5
Isopropylbenzene	µg/L	5			<5	<5	<5	<5	<5
n-butylbenzene	µg/L	5			<5	<5	<5	<5	<5
n-propylbenzene	µg/L	5			<5	<5	<5	<5	<5
p-isopropyltoluene	µg/L	5			<5	<5	<5	<5	<5
sec-butylbenzene	µg/L	5			<5	<5	<5	<5	<5
tert-butylbenzene	µg/L	5			<5	<5	<5	<5	<5
Benzene	µg/L	1		**700**[#6]	<1	<1	<1	<1	<1
Toluene	µg/L	2			<2	<2	<2	<2	<2
Ethylbenzene	µg/L	2			<2	<2	<2	<2	<2
Xylene (m & p)	µg/L	2			<2	<2	<2	<2	<2
Xylene (o)	µg/L	2			<2	<2	<2	<2	<2

				Lab Report Number	EM2202619	EM2202619	EM2202619	EM2202619	EM2202619
				Field ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Location Code	BH01	BH02	BH03	BH06	BH06
				Date	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
	Unit	**EQL**	PFAS NEMP 2020 Table 5 Interim Marine 95%	**ANZG (2018) Marine water 95% toxicant DGVs**					
Chlorinated Hydrocarbons									
1,1,1,2-tetrachloroethane	µg/L	5			<5	<5	<5	<5	<5
1,1,1-trichloroethane	µg/L	5			<5	<5	<5	<5	<5
1,1,2,2-tetrachloroethane	µg/L	5			<5	<5	<5	<5	<5
1,1,2-trichloroethane	µg/L	5		**1,900**[#7]	<5	<5	<5	<5	<5
1,1-dichloroethane	µg/L	5			<5	<5	<5	<5	<5
1,1-dichloroethene	µg/L	5			<5	<5	<5	<5	<5
1,2,3-trichloropropane	µg/L	5			<5	<5	<5	<5	<5
1,2-dibromo-3-chloropropane	µg/L	5			<5	<5	<5	<5	<5
1,2-dichloroethane	µg/L	5			<5	<5	<5	<5	<5
1,2-dichloropropane	µg/L	5			<5	<5	<5	<5	<5
1,3-dichloropropane	µg/L	5			<5	<5	<5	<5	<5
2,2-dichloropropane	µg/L	5			<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5			<5	<5	<5	<5	<5
Bromoform	µg/L	5			<5	<5	<5	<5	<5
Carbon tetrachloride	µg/L	5			<5	<5	<5	<5	<5
Chlorodibromomethane	µg/L	5			<5	<5	<5	<5	<5
Chloroethane	µg/L	50			<50	<50	<50	<50	<50
Chloroform	µg/L	5			**6**	**13**	<5	<5	<5
Chloromethane	µg/L	50			<50	<50	<50	<50	<50
cis-1,2-dichloroethene	µg/L	5			<5	<5	<5	<5	<5
cis-1,3-dichloropropene	µg/L	5			<5	<5	<5	<5	<5
trans-1,2-dichloroethene	µg/L	5			<5	<5	<5	<5	<5
trans-1,3-dichloropropene	µg/L	5			<5	<5	<5	<5	<5
Dibromomethane	µg/L	5			<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	2			<2	<2	<2	<2	<2
Hexachlorocyclopentadiene	µg/L	10			<10	<10	<10	<10	<10
Hexachloroethane	µg/L	2			<2	<2	<2	<2	<2
Trichloroethene (TCE)	µg/L	5			<5	<5	<5	<5	<5
Tetrachloroethene (PCE)	µg/L	5			<5	<5	<5	<5	<5
Vinyl chloride	µg/L	50			<50	<50	<50	<50	<50
Halogenated Benzenes									
1,2,3-trichlorobenzene	µg/L	5			<5	<5	<5	<5	<5
1,2,4-trichlorobenzene	µg/L	2		**80**[#8]	<2	<2	<2	<2	<2
1,2-dichlorobenzene	µg/L	2			<2	<2	<2	<2	<2
1,3-dichlorobenzene	µg/L	2			<2	<2	<2	<2	<2
1,4-dichlorobenzene	µg/L	2			<2	<2	<2	<2	<2
2-chlorotoluene	µg/L	5			<5	<5	<5	<5	<5
4-chlorotoluene	µg/L	5			<5	<5	<5	<5	<5
Bromobenzene	µg/L	5			<5	<5	<5	<5	<5
Chlorobenzene	µg/L	5			<5	<5	<5	<5	<5
Hexachlorobenzene	µg/L	4			<4	<4	<4	<4	<4
Pentachlorobenzene	µg/L	2			<2	<2	<2	<2	<2
Halogenated Hydrocarbons									
1,2-dibromoethane	µg/L	5			<5	<5	<5	<5	<5
Bromomethane	µg/L	50			<50	<50	<50	<50	<50
Dichlorodifluoromethane	µg/L	50			<50	<50	<50	<50	<50
Iodomethane	µg/L	5			<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	50			<50	<50	<50	<50	<50
Solvents									
Methyl Ethyl Ketone	µg/L	50			<50	<50	<50	<50	<50
2-hexanone (MBK)	µg/L	50			<50	<50	<50	<50	<50
4-Methyl-2-pentanone	µg/L	50			<50	<50	<50	<50	<50
Carbon disulfide	µg/L	5			<5	<5	<5	<5	<5
Isophorone	µg/L	2			<2	<2	<2	<2	<2
Vinyl acetate	µg/L	50			<50	<50	<50	<50	<50
Volatile Organic Compounds (VOCs)									
1,1-dichloropropene	µg/L	5			<5	<5	<5	<5	<5
cis-1,4-Dichloro-2-butene	µg/L	5			<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5			<5	<5	<5	<5	<5
Styrene	µg/L	5			<5	<5	<5	<5	<5
trans-1,4-Dichloro-2-butene	µg/L	5			<5	<5	<5	<5	<5
Semi Volatile Organic Compounds (SVOCs)									
2-(acetylamino) fluorene	µg/L	2			<2	<2	<2	<2	<2
3,3-Dichlorobenzidine	µg/L	2			<2	<2	<2	<2	<2
4-(dimethylamino) azobenzene	µg/L	2			<2	<2	<2	<2	<2
4-bromophenyl phenyl ether	µg/L	2			<2	<2	<2	<2	<2
4-chlorophenyl phenyl ether	µg/L	2			<2	<2	<2	<2	<2
4-Nitroquinoline-N-oxide	µg/L	2			<2	<2	<2	<2	<2
Azobenzene	µg/L	2			<2	<2	<2	<2	<2
Bis(2-chloroethoxy) methane	µg/L	2			<2	<2	<2	<2	<2
Bis(2-chloroethyl)ether	µg/L	2			<2	<2	<2	<2	<2
Dibenzofuran	µg/L	2			<2	<2	<2	<2	<2
Hexachloropropene	µg/L	2			<2	<2	<2	<2	<2
Methapyrilene	µg/L	2			<2	<2	<2	<2	<2
N-nitrosomorpholine	µg/L	2			<2	<2	<2	<2	<2
N-nitrosopiperidine	µg/L	2			<2	<2	<2	<2	<2
N-nitrosopyrrolidine	µg/L	4			<4	<4	<4	<4	<4
Phenacetin	µg/L	2			<2	<2	<2	<2	<2

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				Lab Report Number	EM2202619	EM2202619	EM2202619	EM2202619	EM2202619
				Field ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Location Code	BH01	BH02	BH03	BH06	BH06
				Date	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
	Unit	**EQL**	PFAS NEMP 2020 Table 5 Interim Marine 95%	**ANZG (2018) Marine water 95% toxicant DGVs**					
Per- and Poly-fluoroalkyl Substances (PFAS)									
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.01	0.13		<0.01	**0.03**	<0.01	**0.11**	**0.11**
Perfluorooctanoic acid (PFOA)	µg/L	0.01	220		<0.01	<0.01	<0.01	**0.02**	**0.01**
Perfluorooctanesulfonamide (PFOSA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoro-n-pentanoic acid (PFPeA)	µg/L	0.02			<0.02	<0.02	<0.02	**0.04**	**0.04**
Perfluorononanoic acid (PFNA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	µg/L	0.02			<0.02	<0.02	<0.02	**0.04**	**0.04**
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.01			<0.01	**0.02**	<0.01	**0.11**	**0.08**
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid (PFBA)	µg/L	0.1			<0.1	<0.1	<0.1	<0.1	<0.1
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	µg/L	0.02			<0.02	<0.02	<0.02	<0.02	<0.02
Sum of WA DWER PFAS (n=10)*	µg/L	0.01			<0.01	**0.05**	<0.01	**0.32**	**0.28**
Sum (PFHxS + PFOS)	µg/L	0.01			<0.01	**0.05**	<0.01	**0.22**	**0.19**
Sum of PFAS	µg/L	0.01			<0.01	**0.05**	<0.01	**0.32**	**0.28**
(n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05
Phenols									
2,4,5-trichlorophenol	µg/L	2			<2	<2	<2	<2	<2
2,4,6-trichlorophenol	µg/L	2			<2	<2	<2	<2	<2
2,4-dichlorophenol	µg/L	2			<2	<2	<2	<2	<2
2,4-dimethylphenol	µg/L	2			<2	<2	<2	<2	<2
2,6-dichlorophenol	µg/L	2			<2	<2	<2	<2	<2
2-chlorophenol	µg/L	2			<2	<2	<2	<2	<2
2-methylphenol	µg/L	2			<2	<2	<2	<2	<2
2-nitrophenol	µg/L	2			<2	<2	<2	<2	<2
4-chloro-3-methylphenol	µg/L	2			<2	<2	<2	<2	<2
3&4-Methylphenol (m&p-cresol)	µg/L	4			<4	<4	<4	<4	<4
Pentachlorophenol	µg/L	4		**22**	<4	<4	<4	<4	<4
Phenol	µg/L	2		**400**[#4]	<2	<2	<2	<2	<2
Phthalates									
Bis(2-ethylhexyl) phthalate	µg/L	10			<10	<10	<10	<10	<10
Butyl benzyl phthalate	µg/L	2			<2	<2	<2	<2	<2
Diethylphthalate	µg/L	2			<2	<2	<2	<2	<2
Dimethyl phthalate	µg/L	2			<2	<2	<2	<2	<2
Di-n-butyl phthalate	µg/L	2			<2	<2	<2	<2	<2
Di-n-octyl phthalate	µg/L	2			<2	<2	<2	<2	<2

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				Lab Report Number	EM2202619	EM2202619	EM2202619	EM2202619	EM2202619
				Field ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Location Code	BH01	BH02	BH03	BH06	BH06
				Date	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
	Unit	**EQL**	PFAS NEMP 2020 Table 5 Interim Marine 95%	**ANZG (2018) Marine water 95% toxicant DGVs**					
Organochlorine Pesticides (OCPs)									
4,4-DDE	µg/L	2			<2	<2	<2	<2	<2
a-BHC	µg/L	2			<2	<2	<2	<2	<2
Aldrin	µg/L	2			<2	<2	<2	<2	<2
Aldrin + Dieldrin	µg/L	4			<4	<4	<4	<4	<4
b-BHC	µg/L	2			<2	<2	<2	<2	<2
d-BHC	µg/L	2			<2	<2	<2	<2	<2
DDD	µg/L	2			<2	<2	<2	<2	<2
DDT	µg/L	4			<4	<4	<4	<4	<4
DDT+DDE+DDD	µg/L	4			<4	<4	<4	<4	<4
Chlorobenzilate	µg/L	2			<2	<2	<2	<2	<2
Dieldrin	µg/L	2			<2	<2	<2	<2	<2
Endosulfan I	µg/L	2			<2	<2	<2	<2	<2
Endosulfan II	µg/L	2			<2	<2	<2	<2	<2
Endosulfan sulfate	µg/L	2			<2	<2	<2	<2	<2
Endrin	µg/L	2		**0.008**[#8]	<2	<2	<2	<2	<2
g-BHC (Lindane)	µg/L	2			<2	<2	<2	<2	<2
Heptachlor	µg/L	2			<2	<2	<2	<2	<2
Heptachlor epoxide	µg/L	2			<2	<2	<2	<2	<2
Organophosphorous Pesticides (OPPs)									
Chlorfenvinphos	µg/L	2			<2	<2	<2	<2	<2
Chlorpyrifos	µg/L	2		**0.009**[#4]	<2	<2	<2	<2	<2
Chlorpyrifos-methyl	µg/L	2			<2	<2	<2	<2	<2
Diazinon	µg/L	2			<2	<2	<2	<2	<2
Dichlorvos	µg/L	2			<2	<2	<2	<2	<2
Dimethoate	µg/L	2			<2	<2	<2	<2	<2
Ethion	µg/L	2			<2	<2	<2	<2	<2
Fenthion	µg/L	2			<2	<2	<2	<2	<2
Malathion	µg/L	2			<2	<2	<2	<2	<2
Pirimphos-ethyl	µg/L	2			<2	<2	<2	<2	<2
Prothiofos	µg/L	2			<2	<2	<2	<2	<2
Herbicides									
Pronamide	µg/L	2			<2	<2	<2	<2	<2
Amino Aliphatics									
N-nitrosodiethylamine	µg/L	2			<2	<2	<2	<2	<2
N-nitrosodi-n-butylamine	µg/L	2			<2	<2	<2	<2	<2
N-nitrosodi-n-propylamine	µg/L	2			<2	<2	<2	<2	<2
N-Nitrosomethylethylamine	µg/L	2			<2	<2	<2	<2	<2
Amino Aromatics									
1-naphthylamine	µg/L	2			<2	<2	<2	<2	<2
N-Nitrosodiphenyl & Diphenylamine	µg/L	4			<4	<4	<4	<4	<4
Anilines									
2-nitroaniline	µg/L	4			<4	<4	<4	<4	<4
3-nitroaniline	µg/L	4			<4	<4	<4	<4	<4
4-chloroaniline	µg/L	2			<2	<2	<2	<2	<2
4-nitroaniline	µg/L	2			<2	<2	<2	<2	<2
2-methyl-5-nitroaniline	µg/L	2			<2	<2	<2	<2	<2
Aniline	µg/L	2			<2	<2	<2	<2	<2
Nitroaromatics									
2-Picoline	µg/L	2			<2	<2	<2	<2	<2
4-aminobiphenyl	µg/L	2			<2	<2	<2	<2	<2
Pentachloronitrobenzene	µg/L	2			<2	<2	<2	<2	<2
Explosives									
1,3,5-Trinitrobenzene	µg/L	2			<2	<2	<2	<2	<2
2,4-Dinitrotoluene	µg/L	4			<4	<4	<4	<4	<4
2,6-dinitrotoluene	µg/L	4			<4	<4	<4	<4	<4
Nitrobenzene	µg/L	2			<2	<2	<2	<2	<2

Comments

#1 High reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and
#2 High reliability
#3 Very high reliability
#4 Low reliability
#5 Moderate reliability. Ammonia as total ammonia, measured as [NH3-N] at pH 8.
#6 Moderate reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data
#7 Very Low reliability
#8 Moderate reliability

Environmental Standards

ANZG, 2018, ANZG (2018) Marine water 95% toxicant DGVs

Project Marinus_Heybridge

Asbestos Data Table

		Lab Report Number	EM2202101	EM2202101	EM2202101
		Field ID	HB-TP01-PACM	HB-TP02-C-PACM-0.9	HB-TP09-C-PACM
		Location Code	TP01	TP02	TP09
		Depth		0.9	
		Date	28/01/2022	28/01/2022	31/01/2022
	Unit	**EQL**			
Asbestos					
Organic Fibre	g/kg	0.1	No	No	No
Synthetic Mineral Fibre	g/kg	0.1	**Yes**	**Yes**	No
Approved Identifier	--		**U.DALKIN**	**U.DALKIN**	**U.DALKIN**
Sample Weight	g	0.01	**2.50**	**1.90**	**4.30**
Description	--		**1**[#4]	**1**[#6]	**1**[#7]
Asbestos fibres	g/kg	0.1	No	No	**Yes**
Asbestos (Trace)	Fibres	5	No	No	N/A
Asbestos Type	--		-	-	**Ch + Am + Cr**
Asbestos Type	-		N/A	N/A	-

Comments

#4 Grey fragment with synthetic mineral fibres approx 40 x 30 x 1mm.

#6 Brown fragment with synthetic mineral fibres approx 35 x 25 x 2mm.

#7 Asbestos sheeting fragment approx 30 x 20 x 5mm.

Project Marinus_Heybridge

Jacobs

RPD Data Table (Soil)

			Lab Report Number	EM2202101	EM2202101	RPD	EM2202101	864101	RPD
			Field ID	HB-TP01-C-0.1	QC001_280122		HB-TP01-C-0.1	QC101_280122	
			Date	28/01/2022	28/01/2022		28/01/2022	28/01/2022	
			Sample Type	Normal	Field Duplicate		Normal	Interlab Duplicate	
			Matrix Type	Soil	Soil		Soil	Soil	
	Unit	EQL							
Metals									
Arsenic	mg/kg	2	<5	<5	0	<5	**2.3**	0
Barium	mg/kg	10	**40**	**30**	29	**40**	**26**	42
Beryllium	mg/kg	1	<1	<1	0	<1	<2	0
Boron	mg/kg	10	<50	<50	0	<50	<10	0
Cadmium	mg/kg	0.4	<1	<1	0	<1	<0.4	0
Chromium (III+VI)	mg/kg	2	**17**	**15**	12	**17**	**16**	6
Cobalt	mg/kg	2	**4**	**4**	0	**4**	**6.2**	43
Copper	mg/kg	5	**29**	**30**	3	**29**	**24**	19
Lead	mg/kg	5	**120**	**203**	**51**	**120**	**220**	**59**
Manganese	mg/kg	5	**130**	**144**	10	**130**	**190**	**38**
Mercury	mg/kg	0.1	**0.6**	**1.1**	**59**	**0.6**	**1.1**	**59**
Nickel	mg/kg	2	**20**	**20**	0	**20**	**28**	33
Selenium	mg/kg	2	<5	<5	0	<5	<2	0
Titanium	mg/kg	10	**1,300**	**1,650**	24	**1,300**	**1,500**	14
Vanadium	mg/kg	5	**17**	**15**	12	**17**	**16**	6
Zinc	mg/kg	5	**68**	**85**	22	**68**	**73**	7
Inorganics								
Chloride	mg/kg	10	**10**	-	-	**10**	-	-
Cyanide Total	mg/kg	1	-	-	-	-	-	-
Electrical conductivity (lab)	uS/cm	1	**271**	-	-	**271**	-	-
Sulfate as SO4 2-	mg/kg	10	-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	10	**330**	-	-	**330**	-	-
Resistivity (Saturated Paste)								
Resistivity	OHM.M	0.01	**36.9**	-	-	**36.9**	-	-
Physiochemical parameters								
Moisture Content	%	0.1	**11.8**	**12.7**	7	**11.8**	-	-
pH (Lab)	pH Units	0.1	**8.0**	-	-	**8.0**	-	-
Moisture Content (dried @ 103°C)	%	1	-	-	-	-	**14**	-
pH (CaCl2)	pH Units	0.1	-	-	-	-	-	-
TRH - NEPM 2013 Fractions								
TRH >C6 - C10	mg/kg	10	<10	<10	0	<10	<20	0
TRH >C10 - C16	mg/kg	50	<50	<50	0	<50	<50	0
TRH >C16 - C34	mg/kg	100	**220**	**260**	17	**220**	**280**	24
TRH >C34 - C40	mg/kg	100	**180**	**130**	32	**180**	**160**	12
TRH >C10 - C40 (Sum of total)	mg/kg	50	**400**	**390**	3	**400**	**440**	10
TRH >C6 - C10 less BTEX (F1)	mg/kg	10	<10	<10	0	<10	<20	0
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50	<50	<50	0	<50	<50	0
TPH - NEPM 1999 Fractions								
TPH C6 - C9	mg/kg	10	<10	<10	0	<10	<20	0
TPH C10 - C14	mg/kg	20	<50	<50	0	<50	<20	0
TPH C15 - C28	mg/kg	50	<100	**130**	26	<100	**120**	18
TPH C29-C36	mg/kg	50	**220**	**180**	20	**220**	**250**	13
TPH C10 - C36 (Sum of total)	mg/kg	50	**220**	**310**	34	**220**	**370**	51
Polycyclic aromatic hydrocarbons (PAHs)								
1-Chloronaphthalene	mg/kg	0.5	-	-	-	-	-	-
2-chloronaphthalene	mg/kg	0.5	-	-	-	-	-	-
2-methylnaphthalene	mg/kg	0.5	-	-	-	-	-	-
3-methylcholanthrene	mg/kg	0.5	-	-	-	-	-	-
7,12-dimethylbenz(a)anthracene	mg/kg	0.5	-	-	-	-	-	-
Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Acetophenone	mg/kg	0.5	-	-	-	-	-	-
Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(b+j+k)fluoranthene	mg/kg	1	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a) pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	**0.6**	**0.6**	0	**0.6**	**0.6**	0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5	**1.2**	**1.2**	0	**1.2**	**1.2**	0
Carbazole	mg/kg	0.5	-	-	-	-	-	-
Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Naphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Monocyclic Aromatic Hydrocarbons (MAHs)								
1,2,4-trimethylbenzene	mg/kg	0.5	-	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5	-	-	-	-	-	-
Isopropylbenzene	mg/kg	0.5	-	-	-	-	-	-
n-butylbenzene	mg/kg	0.5	-	-	-	-	-	-
n-propylbenzene	mg/kg	0.5	-	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.5	-	-	-	-	-	-
sec-butylbenzene	mg/kg	0.5	-	-	-	-	-	-
tert-butylbenzene	mg/kg	0.5	-	-	-	-	-	-
Benzene	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0
Toluene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0
Ethylbenzene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0
Xylene (m & p)	mg/kg	0.2	<0.5	<0.5	0	<0.5	<0.2	0
Xylene (o)	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0
Xylene Total	mg/kg	0.3	<0.5	<0.5	0	<0.5	<0.3	0
Total BTEX	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-
Total MAH	mg/kg	0.5	-	-	-	-	-	-

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		Field ID	HB-TP01-C-0.1	QC001_280122		HB-TP01-C-0.1	QC101_280122	
		Date	28/01/2022	28/01/2022		28/01/2022	28/01/2022	
		Sample Type	Normal	Field Duplicate		Normal	Interlab Duplicate	
		Matrix Type	Soil	Soil		Soil	Soil	
	Unit	EQL						
Chlorinated Hydrocarbons								
1,1,1,2-tetrachloroethane	mg/kg	0.5	-	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5	-	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5	-	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5	-	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.5	-	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.5	-	-	-	-	-	-
1,2,3,4-tetrachlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5	-	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.5	-	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.5	-	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.5	-	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.5	-	-	-	-	-	-
2,2-dichloropropane	mg/kg	0.5	-	-	-	-	-	-
Benzyl chloride	mg/kg	0.5	-	-	-	-	-	-
Bromochloromethane	mg/kg	0.5	-	-	-	-	-	-
Bromodichloromethane	mg/kg	0.5	-	-	-	-	-	-
Bromoform	mg/kg	0.5	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.5	-	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.5	-	-	-	-	-	-
Chloroethane	mg/kg	0.5	-	-	-	-	-	-
Chloroform	mg/kg	0.5	-	-	-	-	-	-
Chloromethane	mg/kg	0.5	-	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5	-	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5	-	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5	-	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5	-	-	-	-	-	-
Dibromomethane	mg/kg	0.5	-	-	-	-	-	-
Dichloromethane	mg/kg	0.5	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	0.5	-	-	-	-	-	-
Hexachloroethane	mg/kg	0.5	-	-	-	-	-	-
Trichloroethene (TCE)	mg/kg	0.5	-	-	-	-	-	-
Tetrachloroethene (PCE)	mg/kg	0.5	-	-	-	-	-	-
Vinyl chloride	mg/kg	0.5	-	-	-	-	-	-
Halogenated Benzenes								
1,2,3,5-Tetrachlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,2,4,5-tetrachlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,3,5-Trichlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5	-	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5	-	-	-	-	-	-
2-chlorotoluene	mg/kg	0.5	-	-	-	-	-	-
4-chlorotoluene	mg/kg	0.5	-	-	-	-	-	-
Bromobenzene	mg/kg	0.5	-	-	-	-	-	-
Chlorobenzene	mg/kg	0.5	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-
Pentachlorobenzene	mg/kg	0.5	-	-	-	-	-	-
Halogenated Hydrocarbons								
1,2-dibromoethane	mg/kg	0.5	-	-	-	-	-	-
Bromomethane	mg/kg	0.5	-	-	-	-	-	-
Dichlorodifluoromethane	mg/kg	0.5	-	-	-	-	-	-
Iodomethane	mg/kg	0.5	-	-	-	-	-	-
Trichlorofluoromethane	mg/kg	0.5	-	-	-	-	-	-
Solvents								
Methyl Ethyl Ketone	mg/kg	0.5	-	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-	-
4-Methyl-2-pentanone	mg/kg	0.5	-	-	-	-	-	-
Acetone	mg/kg	0.5	-	-	-	-	-	-
Allyl chloride	mg/kg	0.5	-	-	-	-	-	-
Carbon disulfide	mg/kg	0.5	-	-	-	-	-	-
Isophorone	mg/kg	0.5	-	-	-	-	-	-
Vinyl acetate	mg/kg	5	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)								
1,1-dichloropropene	mg/kg	0.5	-	-	-	-	-	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5	-	-	-	-	-	-
Pentachloroethane	mg/kg	0.5	-	-	-	-	-	-
Styrene	mg/kg	0.5	-	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5	-	-	-	-	-	-
Semi Volatile Organic Compounds (SVOCs)								
2-(acetylamino) fluorene	mg/kg	0.5	-	-	-	-	-	-
3,3-Dichlorobenzidine	mg/kg	0.5	-	-	-	-	-	-
4-(dimethylamino) azobenzene	mg/kg	0.5	-	-	-	-	-	-
4-bromophenyl phenyl ether	mg/kg	0.5	-	-	-	-	-	-
4-chlorophenyl phenyl ether	mg/kg	0.5	-	-	-	-	-	-
4-Nitroquinoline-N-oxide	mg/kg	0.5	-	-	-	-	-	-
Azobenzene	mg/kg	1	-	-	-	-	-	-
Bis(2-chloroethoxy) methane	mg/kg	0.5	-	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.5	-	-	-	-	-	-
Bis(2-chloroisopropyl) ether	mg/kg	0.5	-	-	-	-	-	-
Dibenz(a.j)acridine	mg/kg	0.5	-	-	-	-	-	-
Dibenzofuran	mg/kg	0.5	-	-	-	-	-	-
Hexachloropropene	mg/kg	0.5	-	-	-	-	-	-
Methapyrilene	mg/kg	0.5	-	-	-	-	-	-
N-nitrosomorpholine	mg/kg	0.5	-	-	-	-	-	-
N-nitrosopiperidine	mg/kg	0.5	-	-	-	-	-	-
N-nitrosopyrrolidine	mg/kg	1	-	-	-	-	-	-
Phenacetin	mg/kg	0.5	-	-	-	-	-	-

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		Date	28/01/2022	28/01/2022		28/01/2022	28/01/2022	
		Sample Type	Normal	Field Duplicate		Normal	Interlab Duplicate	
		Matrix Type	Soil	Soil		Soil	Soil	
	Unit	EQL						
Per- and Poly-fluoroalkyl Substances (PFAS)								
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	-	-	-	-	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	-	-
Perfluorononanesulfonic acid (PFNS)	ng/kg	5,000	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.0002	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	-	-	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	-	-	-	-	-	-
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	0.0002	-	-	-	-	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.0005	-	-	-	-	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	0.0005	-	-	-	-	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	0.0005	-	-	-	-	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.0005	-	-	-	-	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	0.0002	-	-	-	-	-	-
Sum (PFHxS + PFOS)	mg/kg	0.0002	-	-	-	-	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5	-	-	-	-	-	-
Sum of WA DWER PFAS (n=10)*	ug/kg	0.0002	-	-	-	-	-	-
Sum of PFAS	µg/kg	0.2	-	-	-	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5	-	-	-	-	-	-
(n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	-	-	-	-	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0005	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	-	-	-	-	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	-	-	-	-	-	-
Phenols								
3- & 4-Methylphenol	mg/kg	0.4	-	-	-	-	-	-
2,3,4,6-tetrachlorophenol	mg/kg	5	-	-	-	-	-	-
2,4,5-trichlorophenol	mg/kg	0.5	-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5	-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5	-	-	-	-	-	-
2,4-dimethylphenol	mg/kg	0.5	-	-	-	-	-	-
2,4-dinitrophenol	mg/kg	5	-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5	-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5	-	-	-	-	-	-
2-methylphenol	mg/kg	0.2	-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	5	-	-	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20	-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	0.5	-	-	-	-	-	-
4-nitrophenol	mg/kg	5	-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	0.5	-	-	-	-	-	-
Cresol Total	mg/kg	0.5	-	-	-	-	-	-
Dinoseb	mg/kg	20	-	-	-	-	-	-
Pentachlorophenol	mg/kg	1	-	-	-	-	-	-
Phenol	mg/kg	0.5	-	-	-	-	-	-
Tetrachlorophenols	mg/kg	10	-	-	-	-	-	-
Phenols (Total Halogenated)	mg/kg	1	-	-	-	-	-	-
Phenols (Total Non Halogenated)	mg/kg	20	-	-	-	-	-	-
Phthalates								
Bis(2-ethylhexyl) phthalate	mg/kg	0.5	-	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.5	-	-	-	-	-	-
Diethylphthalate	mg/kg	0.5	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	0.5	-	-	-	-	-	-
Di-n-butyl phthalate	mg/kg	0.5	-	-	-	-	-	-
Di-n-octyl phthalate	mg/kg	0.5	-	-	-	-	-	-

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		Field ID	HB-TP01-C-0.1	QC001_280122		HB-TP01-C-0.1	QC101_280122		
		Date	28/01/2022	28/01/2022	**RPD**	28/01/2022	28/01/2022	**RPD**	
		Sample Type	Normal	Field Duplicate		Normal	Interlab Duplicate		
		Matrix Type	Soil	Soil		Soil	Soil		
	Unit	**EQL**							
Organochlorine Pesticides (OCPs)									
Organochlorine Pesticides (Lab Reported)	mg/kg	0.1	-	-	-	-	-	-	
4,4-DDE	mg/kg	0.05	-	-	-	-	-	-	
a-BHC	mg/kg	0.05	-	-	-	-	-	-	
Aldrin	mg/kg	0.05	-	-	-	-	-	-	
Aldrin + Dieldrin	mg/kg	0.05	-	-	-	-	-	-	
b-BHC	mg/kg	0.05	-	-	-	-	-	-	
Chlordane	mg/kg	0.05	-	-	-	-	-	-	
Chlordane (cis)	mg/kg	0.05	-	-	-	-	-	-	
Chlordane (trans)	mg/kg	0.05	-	-	-	-	-	-	
d-BHC	mg/kg	0.05	-	-	-	-	-	-	
DDD	mg/kg	0.05	-	-	-	-	-	-	
DDT	mg/kg	0.05	-	-	-	-	-	-	
DDT+DDE+DDD	mg/kg	0.05	-	-	-	-	-	-	
Chlorobenzilate	mg/kg	0.5	-	-	-	-	-	-	
Dieldrin	mg/kg	0.05	-	-	-	-	-	-	
Endosulfan	mg/kg	0.05	-	-	-	-	-	-	
Endosulfan I	mg/kg	0.05	-	-	-	-	-	-	
Endosulfan II	mg/kg	0.05	-	-	-	-	-	-	
Endosulfan sulfate	mg/kg	0.05	-	-	-	-	-	-	
Endrin	mg/kg	0.05	-	-	-	-	-	-	
Endrin aldehyde	mg/kg	0.05	-	-	-	-	-	-	
Endrin ketone	mg/kg	0.05	-	-	-	-	-	-	
g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	
Heptachlor	mg/kg	0.05	-	-	-	-	-	-	
Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	
Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	
Toxaphene	mg/kg	0.5	-	-	-	-	-	-	
Organophosphorous Pesticides (OPPs)									
Chlorfenvinphos	mg/kg	0.5	-	-	-	-	-	-	
Chlorpyrifos	mg/kg	0.5	-	-	-	-	-	-	
Chlorpyrifos-methyl	mg/kg	0.5	-	-	-	-	-	-	
Diazinon	mg/kg	0.5	-	-	-	-	-	-	
Dichlorvos	mg/kg	0.5	-	-	-	-	-	-	
Dimethoate	mg/kg	0.5	-	-	-	-	-	-	
Ethion	mg/kg	0.5	-	-	-	-	-	-	
Fenthion	mg/kg	0.5	-	-	-	-	-	-	
Malathion	mg/kg	0.5	-	-	-	-	-	-	
Pirimphos-ethyl	mg/kg	0.5	-	-	-	-	-	-	
Prothiofos	mg/kg	0.5	-	-	-	-	-	-	
Polychlorinated Biphenyls (PCBs)									
Arochlor 1016	mg/kg	0.1	-	-	-	-	-	-	
Arochlor 1221	mg/kg	0.1	-	-	-	-	-	-	
Arochlor 1232	mg/kg	0.1	-	-	-	-	-	-	
Arochlor 1242	mg/kg	0.1	-	-	-	-	-	-	
Arochlor 1248	mg/kg	0.1	-	-	-	-	-	-	
Arochlor 1254	mg/kg	0.1	-	-	-	-	-	-	
Arochlor 1260	mg/kg	0.1	-	-	-	-	-	-	
PCBs (Sum of total)	mg/kg	0.1	-	-	-	-	-	-	
Herbicides									
Pronamide	mg/kg	0.5	-	-	-	-	-	-	
Trifluralin	mg/kg	0.5	-	-	-	-	-	-	
Amino Aliphatics									
N-nitrosodiethylamine	mg/kg	0.5	-	-	-	-	-	-	
N-nitrosodi-n-butylamine	mg/kg	0.5	-	-	-	-	-	-	
N-nitrosodi-n-propylamine	mg/kg	0.5	-	-	-	-	-	-	
N-Nitrosomethylethylamine	mg/kg	0.5	-	-	-	-	-	-	
Amino Aromatics									
1-naphthylamine	mg/kg	0.5	-	-	-	-	-	-	
2-naphthylamine	mg/kg	0.5	-	-	-	-	-	-	
Diphenylamine	mg/kg	0.5	-	-	-	-	-	-	
N-Nitrosodiphenyl & Diphenylamine	mg/kg	1	-	-	-	-	-	-	
Anilines									
2-nitroaniline	mg/kg	0.5	-	-	-	-	-	-	
3-nitroaniline	mg/kg	1	-	-	-	-	-	-	
4-chloroaniline	mg/kg	0.5	-	-	-	-	-	-	
4-nitroaniline	mg/kg	0.5	-	-	-	-	-	-	
2-methyl-5-nitroaniline	mg/kg	0.5	-	-	-	-	-	-	
Aniline	mg/kg	0.5	-	-	-	-	-	-	
Nitroaromatics									
2-Picoline	mg/kg	0.5	-	-	-	-	-	-	
4-aminobiphenyl	mg/kg	0.5	-	-	-	-	-	-	
Pentachloronitrobenzene	mg/kg	0.5	-	-	-	-	-	-	
Explosives									
1,3,5-Trinitrobenzene	mg/kg	0.5	-	-	-	-	-	-	
2,4-Dinitrotoluene	mg/kg	0.5	-	-	-	-	-	-	
2,6-dinitrotoluene	mg/kg	0.5	-	-	-	-	-	-	
Nitrobenzene	mg/kg	0.5	-	-	-	-	-	-	

Project Marinus_Heybridge

RPD Data Table (Soil)

		Lab Report Number	EM2202101	EM2202101		EM2202101	864101	
		Field ID	HB-TP01-C-0.1	QC001_280122		HB-TP01-C-0.1	QC101_280122	
		Date	28/01/2022	28/01/2022	**RPD**	28/01/2022	28/01/2022	**RPD**
		Sample Type	Normal	Field Duplicate		Normal	Interlab Duplicate	
		Matrix Type	Soil	Soil		Soil	Soil	
	Unit	**EQL**						
Asbestos								
Organic Fibre	g/kg	0.1	-	-	-	-	-	-
Synthetic Mineral Fibre	g/kg	0.1	-	-	-	-	-	-
Approved Identifier	Comment		-	-	-	-	-	-
Asbestos Reported Result	Comment		-	-	-	-	-	-
Approximate Sample Mass	g		-	-	-	-	-	-
Sample Weight	g	0.01	-	-	-	-	-	-
Asbestos (Fines and Fibrous FA+AF)	%w/w		-	-	-	-	-	-
Asbestos (FA) - Comment	Comment		-	-	-	-	-	-
Asbestos Fines (AF) - Comment	Comment		-	-	-	-	-	-
Description	Comment		-	-	-	-	-	-
Organic Fibres - Comment	Comment		-	-	-	-	-	-
Respirable Fibres - Comment	Comment		-	-	-	-	-	-
Synthetic Fibres - Comment	Comment		-	-	-	-	-	-
Asbestos fibres	g/kg	0.1	-	-	-	-	-	-
Asbestos from ACM in Soil	%w/w		-	-	-	-	-	-
Asbestos (Trace)	Fibres	5	-	-	-	-	-	-
Asbestos Type	Comment		-	-	-	-	-	-
ACM - Comment	Comment		-	-	-	-	-	-
ACM (Mass)	g		-	-	-	-	-	-
Asbestos in ACM (Mass)	g		-	-	-	-	-	-
Asbestos (AF) - Mass	g		-	-	-	-	-	-
Asbestos in AF (Mass)	g		-	-	-	-	-	-
Asbestos in FA & AF (Mass)	g		-	-	-	-	-	-
Asbestos (FA) - Mass	g		-	-	-	-	-	-
Asbestos in FA (Mass)	g		-	-	-	-	-	-

Comments
#1 No
#2 U.DALKIN
#3 Beige tan clay like soil with rock matter.
#4 -
#5 Beige tan clay like soil.
#6 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.
#7 Nil
#8 Organic fibres detected.
#9 Beige soil with rock matter.

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 80 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP04-C-0.5	QC02_310122		HB-TP04-C-0.5	QC102_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Metals							
Arsenic	mg/kg	-	-	-	-	-	-
Barium	mg/kg	-	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Boron	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	-	-	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-	-
Titanium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-
Inorganics							
Chloride	mg/kg	-	-	-	-	-	-
Cyanide Total	mg/kg	<1	<1	0	<1	<5	0
Electrical conductivity (lab)	uS/cm	-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	-	-	-	-	-	-
Resistivity (Saturated Paste)							
Resistivity	OHM.M	-	-	-	-	-	-
Physiochemical parameters							
Moisture Content	%	**5.3**	**5.6**	6	**5.3**	-	-
pH (Lab)	pH Units	-	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	-	-	-	-	**5.9**	-
pH (CaCl2)	pH Units	-	-	-	-	-	-
TRH - NEPM 2013 Fractions							
TRH >C6 - C10	mg/kg	-	-	-	-	-	-
TRH >C10 - C16	mg/kg	-	-	-	-	-	-
TRH >C16 - C34	mg/kg	-	-	-	-	-	-
TRH >C34 - C40	mg/kg	-	-	-	-	-	-
TRH >C10 - C40 (Sum of total)	mg/kg	-	-	-	-	-	-
TRH >C6 - C10 less BTEX (F1)	mg/kg	-	-	-	-	-	-
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	-	-	-	-	-	-
TPH - NEPM 1999 Fractions							
TPH C6 - C9	mg/kg	-	-	-	-	-	-
TPH C10 - C14	mg/kg	-	-	-	-	-	-
TPH C15 - C28	mg/kg	-	-	-	-	-	-
TPH C29-C36	mg/kg	-	-	-	-	-	-
TPH C10 - C36 (Sum of total)	mg/kg	-	-	-	-	-	-
Polycyclic aromatic hydrocarbons (PAHs)							
1-Chloronaphthalene	mg/kg	-	-	-	-	<0.5	-
2-chloronaphthalene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2-methylnaphthalene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
3-methylcholanthrene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
7,12-dimethylbenz(a)anthracene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthylene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Acetophenone	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Anthracene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Benz(a)anthracene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(b+j+k)fluoranthene	mg/kg	<1	<1	0	<1	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	<0.5	-
Benzo(b+j)fluoranthene	mg/kg	-	-	-	-	<0.5	-
Benzo(g,h,i)perylene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a) pyrene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	**0.6**	**0.6**	0	**0.6**	**0.6**	0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	**1.2**	**1.2**	0	**1.2**	**1.2**	0
Carbazole	mg/kg	<0.5	<0.5	0	<0.5	-	-
Chrysene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Dibenz(a,h)anthracene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Fluoranthene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Fluorene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Phenanthrene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Pyrene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Naphthalene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
PAHs (Sum of total)	mg/kg	<0.5	<0.5	0	<0.5	-	-
Monocyclic Aromatic Hydrocarbons (MAHs)							
1,2,4-trimethylbenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,3,5-trimethylbenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Isopropylbenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
n-butylbenzene	mg/kg	<0.5	<0.5	0	<0.5	-	-
n-propylbenzene	mg/kg	<0.5	<0.5	0	<0.5	-	-
p-isopropyltoluene	mg/kg	<0.5	<0.5	0	<0.5	-	-
sec-butylbenzene	mg/kg	<0.5	<0.5	0	<0.5	-	-
tert-butylbenzene	mg/kg	<0.5	<0.5	0	<0.5	-	-
Benzene	mg/kg	<0.2	<0.2	0	<0.2	<0.1	0
Toluene	mg/kg	<0.5	<0.5	0	<0.5	<0.1	0
Ethylbenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.1	0
Xylene (m & p)	mg/kg	<0.5	<0.5	0	<0.5	<0.2	0
Xylene (o)	mg/kg	<0.5	<0.5	0	<0.5	<0.1	0
Xylene Total	mg/kg	-	-	-	-	<0.3	-
Total BTEX	mg/kg	-	-	-	-	-	-
Total MAH	mg/kg	-	-	-	-	<0.5	-

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP04-C-0.5	QC02_310122		HB-TP04-C-0.5	QC102_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Chlorinated Hydrocarbons							
1,1,1,2-tetrachloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,1,1-trichloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,1,2,2-tetrachloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,1,2-trichloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,1-dichloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,1-dichloroethene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,2,3,4-tetrachlorobenzene	mg/kg	-	-	-	-	<0.5	-
1,2,3-trichloropropane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dibromo-3-chloropropane	mg/kg	<0.5	<0.5	0	<0.5	-	-
1,2-dichloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dichloropropane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,3-dichloropropane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2,2-dichloropropane	mg/kg	<0.5	<0.5	0	<0.5	-	-
Benzyl chloride	mg/kg	-	-	-	-	<0.5	-
Bromochloromethane	mg/kg	-	-	-	-	<0.5	-
Bromodichloromethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Bromoform	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Carbon tetrachloride	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Chlorodibromomethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Chloroethane	mg/kg	<5	<5	0	<5	<0.5	0
Chloroform	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Chloromethane	mg/kg	<5	<5	0	<5	<0.5	0
cis-1,2-dichloroethene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
cis-1,3-dichloropropene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
trans-1,2-dichloroethene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
trans-1,3-dichloropropene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Dibromomethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Dichloromethane	mg/kg	-	-	-	-	<0.5	-
Hexachlorobutadiene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Hexachlorocyclopentadiene	mg/kg	<2.5	<2.5	0	<2.5	<0.5	0
Hexachloroethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Trichloroethene (TCE)	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Tetrachloroethene (PCE)	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Vinyl chloride	mg/kg	<5	<5	0	<5	<0.5	0
Halogenated Benzenes							
1,2,3,5-Tetrachlorobenzene	mg/kg	-	-	-	-	<0.5	-
1,2,3-trichlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,2,4,5-tetrachlorobenzene	mg/kg	-	-	-	-	<0.5	-
1,2,4-trichlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dichlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,3,5-Trichlorobenzene	mg/kg	-	-	-	-	<0.5	-
1,3-dichlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
1,4-dichlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2-chlorotoluene	mg/kg	<0.5	<0.5	0	<0.5	-	-
4-chlorotoluene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Bromobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Chlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Hexachlorobenzene	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Pentachlorobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Halogenated Hydrocarbons							
1,2-dibromoethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Bromomethane	mg/kg	<5	<5	0	<5	<0.5	0
Dichlorodifluoromethane	mg/kg	<5	<5	0	<5	<0.5	0
Iodomethane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Trichlorofluoromethane	mg/kg	<5	<5	0	<5	<0.5	0
Solvents							
Methyl Ethyl Ketone	mg/kg	<5	<5	0	<5	<0.5	0
2-hexanone (MBK)	mg/kg	<5	<5	0	<5	-	-
4-Methyl-2-pentanone	mg/kg	<5	<5	0	<5	<0.5	0
Acetone	mg/kg	-	-	-	-	<0.5	-
Allyl chloride	mg/kg	-	-	-	-	<0.5	-
Carbon disulfide	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Isophorone	mg/kg	<0.5	<0.5	0	<0.5	-	-
Vinyl acetate	mg/kg	<5	<5	0	<5	-	-
Volatile Organic Compounds (VOCs)							
1,1-dichloropropene	mg/kg	<0.5	<0.5	0	<0.5	-	-
cis-1,4-Dichloro-2-butene	mg/kg	<0.5	<0.5	0	<0.5	-	-
Pentachloroethane	mg/kg	<0.5	<0.5	0	<0.5	-	-
Styrene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
trans-1,4-Dichloro-2-butene	mg/kg	<0.5	<0.5	0	<0.5	-	-
Semi Volatile Organic Compounds (SVOCs)							
2-(acetylamino) fluorene	mg/kg	<0.5	<0.5	0	<0.5	-	-
3,3-Dichlorobenzidine	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
4-(dimethylamino) azobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
4-bromophenyl phenyl ether	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
4-chlorophenyl phenyl ether	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
4-Nitroquinoline-N-oxide	mg/kg	<0.5	<0.5	0	<0.5	-	-
Azobenzene	mg/kg	<1	<1	0	<1	-	-
Bis(2-chloroethoxy) methane	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Bis(2-chloroethyl)ether	mg/kg	<0.5	<0.5	0	<0.5	-	-
Bis(2-chloroisopropyl) ether	mg/kg	-	-	-	-	<0.5	-
Dibenz(a.j)acridine	mg/kg	-	-	-	-	<0.5	-
Dibenzofuran	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Hexachloropropene	mg/kg	<0.5	<0.5	0	<0.5	-	-
Methapyrilene	mg/kg	<0.5	<0.5	0	<0.5	-	-
N-nitrosomorpholine	mg/kg	<0.5	<0.5	0	<0.5	-	-
N-nitrosopiperidine	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
N-nitrosopyrrolidine	mg/kg	<1.0	<1.0	0	<1.0	-	-
Phenacetin	mg/kg	<0.5	<0.5	0	<0.5	-	-

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP04-C-0.5	QC02_310122		HB-TP04-C-0.5	QC102_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Per- and Poly-fluoroalkyl Substances (PFAS)							
Perfluorooctanesulfonic acid (PFOS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorooctanesulfonamide (PFOSA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	-	-	-	-	<0.005	-
Perfluorononanesulfonic acid (PFNS)	ng/kg	-	-	-	-	<5,000	-
Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorobutanesulfonic acid (PFBS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	-	-	<0.001	<0.005	0
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	<0.0002	-	-	<0.0002	<0.01	0
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	<0.0002	-	-	<0.0002	<0.01	0
Sum (PFHxS + PFOS)	mg/kg	<0.0002	-	-	<0.0002	<0.005	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	-	-	-	-	<5	-
Sum of WA DWER PFAS (n=10)*	ug/kg	<0.0002	-	-	<0.0002	<10	0
Sum of PFAS	µg/kg	<0.2	-	-	<0.2	<50	0
Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	-	-	-	-	<5	-
(n:2) Fluorotelomer Sulfonic Acids							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	<0.01	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	<0.005	0
Phenols							
3- & 4-Methylphenol	mg/kg	-	-	-	-	<0.4	-
2,3,4,6-tetrachlorophenol	mg/kg	-	-	-	-	<5	-
2,4,5-trichlorophenol	mg/kg	<0.5	<0.5	0	<0.5	<1	0
2,4,6-trichlorophenol	mg/kg	<0.5	<0.5	0	<0.5	<1	0
2,4-dichlorophenol	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2,4-dimethylphenol	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2,4-dinitrophenol	mg/kg	-	-	-	-	<5	-
2,6-dichlorophenol	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2-chlorophenol	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2-methylphenol	mg/kg	<0.5	<0.5	0	<0.5	<0.2	0
2-nitrophenol	mg/kg	<0.5	<0.5	0	<0.5	<1	0
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	<5	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	-	-	-	-	<20	-
4-chloro-3-methylphenol	mg/kg	<0.5	<0.5	0	<0.5	<1	0
4-nitrophenol	mg/kg	-	-	-	-	<5	-
3&4-Methylphenol (m&p-cresol)	mg/kg	<0.5	<0.5	0	<0.5	-	-
Cresol Total	mg/kg	-	-	-	-	<0.5	-
Dinoseb	mg/kg	-	-	-	-	<20	-
Pentachlorophenol	mg/kg	<1	<1	0	<1	<1	0
Phenol	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Tetrachlorophenols	mg/kg	-	-	-	-	<10	-
Phenols (Total Halogenated)	mg/kg	-	-	-	-	<1	-
Phenols (Total Non Halogenated)	mg/kg	-	-	-	-	<20	-
Phthalates							
Bis(2-ethylhexyl) phthalate	mg/kg	<5.0	<5.0	0	<5.0	<0.5	0
Butyl benzyl phthalate	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Diethylphthalate	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Dimethyl phthalate	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Di-n-butyl phthalate	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Di-n-octyl phthalate	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP04-C-0.5	QC02_310122		HB-TP04-C-0.5	QC102_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Organochlorine Pesticides (OCPs)							
Organochlorine Pesticides (Lab Reported)	mg/kg	-	-	-	-	<0.1	-
4,4-DDE	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
a-BHC	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Aldrin	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Aldrin + Dieldrin	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
b-BHC	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Chlordane	mg/kg	<0.05	<0.05	0	<0.05	<0.1	0
Chlordane (cis)	mg/kg	<0.05	<0.05	0	<0.05	-	-
Chlordane (trans)	mg/kg	<0.05	<0.05	0	<0.05	-	-
d-BHC	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
DDD	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
DDT	mg/kg	<0.2	<0.2	0	<0.2	<0.05	0
DDT+DDE+DDD	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Chlorobenzilate	mg/kg	<0.5	<0.5	0	<0.5	-	-
Dieldrin	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Endosulfan	mg/kg	<0.05	<0.05	0	<0.05	-	-
Endosulfan I	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Endosulfan II	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Endosulfan sulfate	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Endrin	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Endrin aldehyde	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Endrin ketone	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
g-BHC (Lindane)	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Heptachlor	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Heptachlor epoxide	mg/kg	<0.05	<0.05	0	<0.05	<0.05	0
Methoxychlor	mg/kg	<0.2	<0.2	0	<0.2	<0.05	0
Toxaphene	mg/kg	-	-	-	-	<0.5	-
Organophosphorous Pesticides (OPPs)							
Chlorfenvinphos	mg/kg	<0.5	<0.5	0	<0.5	-	-
Chlorpyrifos	mg/kg	<0.5	<0.5	0	<0.5	-	-
Chlorpyrifos-methyl	mg/kg	<0.5	<0.5	0	<0.5	-	-
Diazinon	mg/kg	<0.5	<0.5	0	<0.5	-	-
Dichlorvos	mg/kg	<0.5	<0.5	0	<0.5	-	-
Dimethoate	mg/kg	<0.5	<0.5	0	<0.5	-	-
Ethion	mg/kg	<0.5	<0.5	0	<0.5	-	-
Fenthion	mg/kg	<0.5	<0.5	0	<0.5	-	-
Malathion	mg/kg	<0.5	<0.5	0	<0.5	-	-
Pirimphos-ethyl	mg/kg	<0.5	<0.5	0	<0.5	-	-
Prothiofos	mg/kg	<0.5	<0.5	0	<0.5	-	-
Polychlorinated Biphenyls (PCBs)							
Arochlor 1016	mg/kg	-	-	-	-	<0.1	-
Arochlor 1221	mg/kg	-	-	-	-	<0.1	-
Arochlor 1232	mg/kg	-	-	-	-	<0.1	-
Arochlor 1242	mg/kg	-	-	-	-	<0.1	-
Arochlor 1248	mg/kg	-	-	-	-	<0.1	-
Arochlor 1254	mg/kg	-	-	-	-	<0.1	-
Arochlor 1260	mg/kg	-	-	-	-	<0.1	-
PCBs (Sum of total)	mg/kg	<0.1	<0.1	0	<0.1	<0.1	0
Herbicides							
Pronamide	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Trifluralin	mg/kg	-	-	-	-	<0.5	-
Amino Aliphatics							
N-nitrosodiethylamine	mg/kg	<0.5	<0.5	0	<0.5	-	-
N-nitrosodi-n-butylamine	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
N-nitrosodi-n-propylamine	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
N-Nitrosomethylethylamine	mg/kg	<0.5	<0.5	0	<0.5	-	-
Amino Aromatics							
1-naphthylamine	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
2-naphthylamine	mg/kg	-	-	-	-	<0.5	-
Diphenylamine	mg/kg	-	-	-	-	<0.5	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	<1.0	<1.0	0	<1.0	-	-
Anilines							
2-nitroaniline	mg/kg	<1.0	<1.0	0	<1.0	<0.5	0
3-nitroaniline	mg/kg	<1.0	<1.0	0	<1.0	-	-
4-chloroaniline	mg/kg	<0.5	<0.5	0	<0.5	-	-
4-nitroaniline	mg/kg	<0.5	<0.5	0	<0.5	-	-
2-methyl-5-nitroaniline	mg/kg	<0.5	<0.5	0	<0.5	-	-
Aniline	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Nitroaromatics							
2-Picoline	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
4-aminobiphenyl	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Pentachloronitrobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0
Explosives							
1,3,5-Trinitrobenzene	mg/kg	<0.5	<0.5	0	<0.5	-	-
2,4-Dinitrotoluene	mg/kg	<1.0	<1.0	0	<1.0	<0.5	0
2,6-dinitrotoluene	mg/kg	<1.0	<1.0	0	<1.0	<0.5	0
Nitrobenzene	mg/kg	<0.5	<0.5	0	<0.5	<0.5	0

Project Marinus_Heybridge

Jacobs

RPD Data Table (Soil)

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP04-C-0.5	QC02_310122		HB-TP04-C-0.5	QC102_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Asbestos							
Organic Fibre	g/kg	-	-	-	-	-	-
Synthetic Mineral Fibre	g/kg	-	-	-	-	-	-
Approved Identifier	Comment	-	-	-	-	-	-
Asbestos Reported Result	Comment	-	-	-	-	-	-
Approximate Sample Mass	g	-	-	-	-	-	-
Sample Weight	g	-	-	-	-	-	-
Asbestos (Fines and Fibrous FA+AF)	%w/w	-	-	-	-	-	-
Asbestos (FA) - Comment	Comment	-	-	-	-	-	-
Asbestos Fines (AF) - Comment	Comment	-	-	-	-	-	-
Description	Comment	-	-	-	-	-	-
Organic Fibres - Comment	Comment	-	-	-	-	-	-
Respirable Fibres - Comment	Comment	-	-	-	-	-	-
Synthetic Fibres - Comment	Comment	-	-	-	-	-	-
Asbestos fibres	g/kg	-	-	-	-	-	-
Asbestos from ACM in Soil	%w/w	-	-	-	-	-	-
Asbestos (Trace)	Fibres	-	-	-	-	-	-
Asbestos Type	Comment	-	-	-	-	-	-
ACM - Comment	Comment	-	-	-	-	-	-
ACM (Mass)	g	-	-	-	-	-	-
Asbestos in ACM (Mass)	g	-	-	-	-	-	-
Asbestos (AF) - Mass	g	-	-	-	-	-	-
Asbestos in AF (Mass)	g	-	-	-	-	-	-
Asbestos in FA & AF (Mass)	g	-	-	-	-	-	-
Asbestos (FA) - Mass	g	-	-	-	-	-	-
Asbestos in FA (Mass)	g	-	-	-	-	-	-

Comments
#1 No
#2 U.DALKIN
#3 Beige tan clay like soil with rock matter.
#4 -
#5 Beige tan clay like soil.
#6 No asbestos detected at the reporting limit of 0.01% w/
#7 Nil
#8 Organic fibres detected.
#9 Beige soil with rock matter.

*RPDs have only been considered where a concentration is
**Elevated RPDs are highlighted as per QAQC Profile settir
***Interlab Duplicates are matched on a per compound ba

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP09-C-0.1	QC003_310122		HB-TP09-C-0.1	QC103_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Metals							
Arsenic	mg/kg	-	-	-	-	-	-
Barium	mg/kg	-	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Boron	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	-	-	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-	-
Titanium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-
Inorganics							
Chloride	mg/kg	-	-	-	-	-	-
Cyanide Total	mg/kg	<1	-	-	<1	-	-
Electrical conductivity (lab)	uS/cm	-	-	-	-	-	-
Sulfate as SO4 2-	mg/kg	-	-	-	-	-	-
Sulfate as SO4 2- (filtered)	mg/kg	-	-	-	-	-	-
Resistivity (Saturated Paste)							
Resistivity	OHM.M	-	-	-	-	-	-
Physiochemical parameters							
Moisture Content	%	**12.9**	-	-	**12.9**	-	-
pH (Lab)	pH Units	-	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	-	-	-	-	-	-
pH (CaCl2)	pH Units	-	-	-	-	-	-
TRH - NEPM 2013 Fractions							
TRH >C6 - C10	mg/kg	-	-	-	-	-	-
TRH >C10 - C16	mg/kg	-	-	-	-	-	-
TRH >C16 - C34	mg/kg	-	-	-	-	-	-
TRH >C34 - C40	mg/kg	-	-	-	-	-	-
TRH >C10 - C40 (Sum of total)	mg/kg	-	-	-	-	-	-
TRH >C6 - C10 less BTEX (F1)	mg/kg	-	-	-	-	-	-
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	-	-	-	-	-	-
TPH - NEPM 1999 Fractions							
TPH C6 - C9	mg/kg	-	-	-	-	-	-
TPH C10 - C14	mg/kg	-	-	-	-	-	-
TPH C15 - C28	mg/kg	-	-	-	-	-	-
TPH C29-C36	mg/kg	-	-	-	-	-	-
TPH C10 - C36 (Sum of total)	mg/kg	-	-	-	-	-	-
Polycyclic aromatic hydrocarbons (PAHs)							
1-Chloronaphthalene	mg/kg	-	-	-	-	-	-
2-chloronaphthalene	mg/kg	<0.5	-	-	<0.5	-	-
2-methylnaphthalene	mg/kg	<0.5	-	-	<0.5	-	-
3-methylcholanthrene	mg/kg	<0.5	-	-	<0.5	-	-
7,12-dimethylbenz(a)anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Acenaphthene	mg/kg	<0.5	-	-	<0.5	-	-
Acenaphthylene	mg/kg	<0.5	-	-	<0.5	-	-
Acetophenone	mg/kg	<0.5	-	-	<0.5	-	-
Anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Benz(a)anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(b+j+k)fluoranthene	mg/kg	<1	-	-	<1	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(a) pyrene	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	**0.6**	-	-	**0.6**	-	-
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	**1.2**	-	-	**1.2**	-	-
Carbazole	mg/kg	<0.5	-	-	<0.5	-	-
Chrysene	mg/kg	<0.5	-	-	<0.5	-	-
Dibenz(a,h)anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Fluoranthene	mg/kg	<0.5	-	-	<0.5	-	-
Fluorene	mg/kg	<0.5	-	-	<0.5	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.5	-	-	<0.5	-	-
Phenanthrene	mg/kg	<0.5	-	-	<0.5	-	-
Pyrene	mg/kg	<0.5	-	-	<0.5	-	-
Naphthalene	mg/kg	<0.5	-	-	<0.5	-	-
PAHs (Sum of total)	mg/kg	<0.5	-	-	<0.5	-	-
Monocyclic Aromatic Hydrocarbons (MAHs)							
1,2,4-trimethylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,3,5-trimethylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
Isopropylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
n-butylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
n-propylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
p-isopropyltoluene	mg/kg	<0.5	-	-	<0.5	-	-
sec-butylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
tert-butylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
Benzene	mg/kg	<0.2	-	-	<0.2	-	-
Toluene	mg/kg	<0.5	-	-	<0.5	-	-
Ethylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
Xylene (m & p)	mg/kg	<0.5	-	-	<0.5	-	-
Xylene (o)	mg/kg	<0.5	-	-	<0.5	-	-
Xylene Total	mg/kg	-	-	-	-	-	-
Total BTEX	mg/kg	-	-	-	-	-	-
Total MAH	mg/kg	-	-	-	-	-	-

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP09-C-0.1	QC003_310122		HB-TP09-C-0.1	QC103_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Chlorinated Hydrocarbons							
1,1,1,2-tetrachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1,1-trichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1,2,2-tetrachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1,2-trichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1-dichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1-dichloroethene	mg/kg	<0.5	-	-	<0.5	-	-
1,2,3,4-tetrachlorobenzene	mg/kg	-	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dibromo-3-chloropropane	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
1,3-dichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
2,2-dichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
Benzyl chloride	mg/kg	-	-	-	-	-	-
Bromochloromethane	mg/kg	-	-	-	-	-	-
Bromodichloromethane	mg/kg	<0.5	-	-	<0.5	-	-
Bromoform	mg/kg	<0.5	-	-	<0.5	-	-
Carbon tetrachloride	mg/kg	<0.5	-	-	<0.5	-	-
Chlorodibromomethane	mg/kg	<0.5	-	-	<0.5	-	-
Chloroethane	mg/kg	<5	-	-	<5	-	-
Chloroform	mg/kg	<0.5	-	-	<0.5	-	-
Chloromethane	mg/kg	<5	-	-	<5	-	-
cis-1,2-dichloroethene	mg/kg	<0.5	-	-	<0.5	-	-
cis-1,3-dichloropropene	mg/kg	<0.5	-	-	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	<0.5	-	-	<0.5	-	-
trans-1,3-dichloropropene	mg/kg	<0.5	-	-	<0.5	-	-
Dibromomethane	mg/kg	<0.5	-	-	<0.5	-	-
Dichloromethane	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	<0.5	-	-	<0.5	-	-
Hexachlorocyclopentadiene	mg/kg	<2.5	-	-	<2.5	-	-
Hexachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
Trichloroethene (TCE)	mg/kg	<0.5	-	-	<0.5	-	-
Tetrachloroethene (PCE)	mg/kg	<0.5	-	-	<0.5	-	-
Vinyl chloride	mg/kg	<5	-	-	<5	-	-
Halogenated Benzenes							
1,2,3,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,2,4,5-tetrachlorobenzene	mg/kg	-	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,3,5-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,4-dichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
2-chlorotoluene	mg/kg	<0.5	-	-	<0.5	-	-
4-chlorotoluene	mg/kg	<0.5	-	-	<0.5	-	-
Bromobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Chlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Hexachlorobenzene	mg/kg	<0.05	-	-	<0.05	-	-
Pentachlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Halogenated Hydrocarbons							
1,2-dibromoethane	mg/kg	<0.5	-	-	<0.5	-	-
Bromomethane	mg/kg	<5	-	-	<5	-	-
Dichlorodifluoromethane	mg/kg	<5	-	-	<5	-	-
Iodomethane	mg/kg	<0.5	-	-	<0.5	-	-
Trichlorofluoromethane	mg/kg	<5	-	-	<5	-	-
Solvents							
Methyl Ethyl Ketone	mg/kg	<5	-	-	<5	-	-
2-hexanone (MBK)	mg/kg	<5	-	-	<5	-	-
4-Methyl-2-pentanone	mg/kg	<5	-	-	<5	-	-
Acetone	mg/kg	-	-	-	-	-	-
Allyl chloride	mg/kg	-	-	-	-	-	-
Carbon disulfide	mg/kg	<0.5	-	-	<0.5	-	-
Isophorone	mg/kg	<0.5	-	-	<0.5	-	-
Vinyl acetate	mg/kg	<5	-	-	<5	-	-
Volatile Organic Compounds (VOCs)							
1,1-dichloropropene	mg/kg	<0.5	-	-	<0.5	-	-
cis-1,4-Dichloro-2-butene	mg/kg	<0.5	-	-	<0.5	-	-
Pentachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
Styrene	mg/kg	<0.5	-	-	<0.5	-	-
trans-1,4-Dichloro-2-butene	mg/kg	<0.5	-	-	<0.5	-	-
Semi Volatile Organic Compounds (SVOCs)							
2-(acetylamino) fluorene	mg/kg	<0.5	-	-	<0.5	-	-
3,3-Dichlorobenzidine	mg/kg	<0.5	-	-	<0.5	-	-
4-(dimethylamino) azobenzene	mg/kg	<0.5	-	-	<0.5	-	-
4-bromophenyl phenyl ether	mg/kg	<0.5	-	-	<0.5	-	-
4-chlorophenyl phenyl ether	mg/kg	<0.5	-	-	<0.5	-	-
4-Nitroquinoline-N-oxide	mg/kg	<0.5	-	-	<0.5	-	-
Azobenzene	mg/kg	<1	-	-	<1	-	-
Bis(2-chloroethoxy) methane	mg/kg	<0.5	-	-	<0.5	-	-
Bis(2-chloroethyl)ether	mg/kg	<0.5	-	-	<0.5	-	-
Bis(2-chloroisopropyl) ether	mg/kg	-	-	-	-	-	-
Dibenz(a.j)acridine	mg/kg	-	-	-	-	-	-
Dibenzofuran	mg/kg	<0.5	-	-	<0.5	-	-
Hexachloropropene	mg/kg	<0.5	-	-	<0.5	-	-
Methapyrilene	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosomorpholine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosopiperidine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosopyrrolidine	mg/kg	<1.0	-	-	<1.0	-	-
Phenacetin	mg/kg	<0.5	-	-	<0.5	-	-

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP09-C-0.1	QC003_310122		HB-TP09-C-0.1	QC103_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Per- and Poly-fluoroalkyl Substances (PFAS)							
Perfluorooctanesulfonic acid (PFOS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	-	-	-	-	-	-
Perfluorononanesulfonic acid (PFNS)	ng/kg	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	-	-	<0.0005	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	-	-	<0.001	-	-
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	<0.0002	-	-	<0.0002	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Sum (PFHxS + PFOS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	-	-	-	-	-	-
Sum of WA DWER PFAS (n=10)*	ug/kg	<0.0002	-	-	<0.0002	-	-
Sum of PFAS	µg/kg	<0.2	-	-	<0.2	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	-	-	-	-	-	-
(n:2) Fluorotelomer Sulfonic Acids							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
Phenols							
3- & 4-Methylphenol	mg/kg	-	-	-	-	-	-
2,3,4,6-tetrachlorophenol	mg/kg	-	-	-	-	-	-
2,4,5-trichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4,6-trichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4-dichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4-dimethylphenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4-dinitrophenol	mg/kg	-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2-chlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2-methylphenol	mg/kg	<0.5	-	-	<0.5	-	-
2-nitrophenol	mg/kg	<0.5	-	-	<0.5	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	<0.5	-	-	<0.5	-	-
4-nitrophenol	mg/kg	-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	<0.5	-	-	<0.5	-	-
Cresol Total	mg/kg	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-
Pentachlorophenol	mg/kg	<1	-	-	<1	-	-
Phenol	mg/kg	<0.5	-	-	<0.5	-	-
Tetrachlorophenols	mg/kg	-	-	-	-	-	-
Phenols (Total Halogenated)	mg/kg	-	-	-	-	-	-
Phenols (Total Non Halogenated)	mg/kg	-	-	-	-	-	-
Phthalates							
Bis(2-ethylhexyl) phthalate	mg/kg	<5.0	-	-	<5.0	-	-
Butyl benzyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-
Diethylphthalate	mg/kg	<0.5	-	-	<0.5	-	-
Dimethyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-
Di-n-butyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-
Di-n-octyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP09-C-0.1	QC003_310122		HB-TP09-C-0.1	QC103_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Organochlorine Pesticides (OCPs)							
Organochlorine Pesticides (Lab Reported)	mg/kg	-	-	-	-	-	-
4,4-DDE	mg/kg	<0.05	-	-	<0.05	-	-
a-BHC	mg/kg	<0.05	-	-	<0.05	-	-
Aldrin	mg/kg	<0.05	-	-	<0.05	-	-
Aldrin + Dieldrin	mg/kg	<0.05	-	-	<0.05	-	-
b-BHC	mg/kg	<0.05	-	-	<0.05	-	-
Chlordane	mg/kg	<0.05	-	-	<0.05	-	-
Chlordane (cis)	mg/kg	<0.05	-	-	<0.05	-	-
Chlordane (trans)	mg/kg	<0.05	-	-	<0.05	-	-
d-BHC	mg/kg	<0.05	-	-	<0.05	-	-
DDD	mg/kg	<0.05	-	-	<0.05	-	-
DDT	mg/kg	<0.2	-	-	<0.2	-	-
DDT+DDE+DDD	mg/kg	<0.05	-	-	<0.05	-	-
Chlorobenzilate	mg/kg	<0.5	-	-	<0.5	-	-
Dieldrin	mg/kg	<0.05	-	-	<0.05	-	-
Endosulfan	mg/kg	<0.05	-	-	<0.05	-	-
Endosulfan I	mg/kg	<0.05	-	-	<0.05	-	-
Endosulfan II	mg/kg	<0.05	-	-	<0.05	-	-
Endosulfan sulfate	mg/kg	<0.05	-	-	<0.05	-	-
Endrin	mg/kg	<0.05	-	-	<0.05	-	-
Endrin aldehyde	mg/kg	<0.05	-	-	<0.05	-	-
Endrin ketone	mg/kg	<0.05	-	-	<0.05	-	-
g-BHC (Lindane)	mg/kg	<0.05	-	-	<0.05	-	-
Heptachlor	mg/kg	<0.05	-	-	<0.05	-	-
Heptachlor epoxide	mg/kg	<0.05	-	-	<0.05	-	-
Methoxychlor	mg/kg	<0.2	-	-	<0.2	-	-
Toxaphene	mg/kg	-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)							
Chlorfenvinphos	mg/kg	<0.5	-	-	<0.5	-	-
Chlorpyrifos	mg/kg	<0.5	-	-	<0.5	-	-
Chlorpyrifos-methyl	mg/kg	<0.5	-	-	<0.5	-	-
Diazinon	mg/kg	<0.5	-	-	<0.5	-	-
Dichlorvos	mg/kg	<0.5	-	-	<0.5	-	-
Dimethoate	mg/kg	<0.5	-	-	<0.5	-	-
Ethion	mg/kg	<0.5	-	-	<0.5	-	-
Fenthion	mg/kg	<0.5	-	-	<0.5	-	-
Malathion	mg/kg	<0.5	-	-	<0.5	-	-
Pirimphos-ethyl	mg/kg	<0.5	-	-	<0.5	-	-
Prothiofos	mg/kg	<0.5	-	-	<0.5	-	-
Polychlorinated Biphenyls (PCBs)							
Arochlor 1016	mg/kg	-	-	-	-	-	-
Arochlor 1221	mg/kg	-	-	-	-	-	-
Arochlor 1232	mg/kg	-	-	-	-	-	-
Arochlor 1242	mg/kg	-	-	-	-	-	-
Arochlor 1248	mg/kg	-	-	-	-	-	-
Arochlor 1254	mg/kg	-	-	-	-	-	-
Arochlor 1260	mg/kg	-	-	-	-	-	-
PCBs (Sum of total)	mg/kg	<0.1	-	-	<0.1	-	-
Herbicides							
Pronamide	mg/kg	<0.5	-	-	<0.5	-	-
Trifluralin	mg/kg	-	-	-	-	-	-
Amino Aliphatics							
N-nitrosodiethylamine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosodi-n-butylamine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosodi-n-propylamine	mg/kg	<0.5	-	-	<0.5	-	-
N-Nitrosomethylethylamine	mg/kg	<0.5	-	-	<0.5	-	-
Amino Aromatics							
1-naphthylamine	mg/kg	<0.5	-	-	<0.5	-	-
2-naphthylamine	mg/kg	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	<1.0	-	-	<1.0	-	-
Anilines							
2-nitroaniline	mg/kg	<1.0	-	-	<1.0	-	-
3-nitroaniline	mg/kg	<1.0	-	-	<1.0	-	-
4-chloroaniline	mg/kg	<0.5	-	-	<0.5	-	-
4-nitroaniline	mg/kg	<0.5	-	-	<0.5	-	-
2-methyl-5-nitroaniline	mg/kg	<0.5	-	-	<0.5	-	-
Aniline	mg/kg	<0.5	-	-	<0.5	-	-
Nitroaromatics							
2-Picoline	mg/kg	<0.5	-	-	<0.5	-	-
4-aminobiphenyl	mg/kg	<0.5	-	-	<0.5	-	-
Pentachloronitrobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Explosives							
1,3,5-Trinitrobenzene	mg/kg	<0.5	-	-	<0.5	-	-
2,4-Dinitrotoluene	mg/kg	<1.0	-	-	<1.0	-	-
2,6-dinitrotoluene	mg/kg	<1.0	-	-	<1.0	-	-
Nitrobenzene	mg/kg	<0.5	-	-	<0.5	-	-

Project Marinus_Heybridge

RPD Data Table (Soil)

		EM2202101	EM2202101	RPD	EM2202101	864101	RPD
		HB-TP09-C-0.1	QC003_310122		HB-TP09-C-0.1	QC103_310122	
		31/01/2022	31/01/2022		31/01/2022	30/01/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Asbestos							
Organic Fibre	g/kg	No	No	-	No	-	-
Synthetic Mineral Fibre	g/kg	No	No	-	No	-	-
Approved Identifier	Comment	U.DALKIN	U.DALKIN	-	U.DALKIN	-	-
Asbestos Reported Result	Comment	-	-	-	-	No	-
Approximate Sample Mass	g	-	-	-	-	**60**	-
Sample Weight	g	**67.3**	**35.7**	**61**	**67.3**	-	-
Asbestos (Fines and Fibrous FA+AF)	%w/w	-	-	-	-	0.0000	-
Asbestos (FA) - Comment	Comment	-	-	-	-	No	-
Asbestos Fines (AF) - Comment	Comment	-	-	-	-	No	-
Description	Comment	**1**[#3]	**1**[#5]	-	**1**[#3]	-	-
Organic Fibres - Comment	Comment	-	-	-	-	**1**[#8]	-
Respirable Fibres - Comment	Comment	-	-	-	-	0	-
Synthetic Fibres - Comment	Comment	-	-	-	-	No	-
Asbestos fibres	g/kg	No	No	-	No	-	-
Asbestos from ACM in Soil	%w/w	-	-	-	-	0.0000	-
Asbestos (Trace)	Fibres	No	No	-	No	-	-
Asbestos Type	Comment	No	No	-	No	-	-
ACM - Comment	Comment	-	-	-	-	No	-
ACM (Mass)	g	-	-	-	-	0.0000	-
Asbestos in ACM (Mass)	g	-	-	-	-	0.0000	-
Asbestos (AF) - Mass	g	-	-	-	-	0.0000	-
Asbestos in AF (Mass)	g	-	-	-	-	0.0000	-
Asbestos in FA & AF (Mass)	g	-	-	-	-	0.0000	-
Asbestos (FA) - Mass	g	-	-	-	-	0.0000	-
Asbestos in FA (Mass)	g	-	-	-	-	0.0000	-

Comments
#1 No
#2 U.DALKIN
#3 Beige tan clay like soil with rock matter.
#4 -
#5 Beige tan clay like soil.
#6 No asbestos detected at the reporting limit of 0.01% w/
#7 Nil
#8 Organic fibres detected.
#9 Beige soil with rock matter.

*RPDs have only been considered where a concentration is
**Elevated RPDs are highlighted as per QAQC Profile settir
***Interlab Duplicates are matched on a per compound ba

		EM2202619	EM2202619	RPD	EM2202619	866176	RPD
		HB-BH01-C-0.5	QC01		HB-BH01-C-0.5	QC02	
		4/02/2022	4/02/2022		4/02/2022	4/02/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Metals							
Arsenic	mg/kg	-	-	-	-	-	-
Barium	mg/kg	-	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-	-
Boron	mg/kg	-	-	-	-	-	-
Cadmium	mg/kg	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	-	-	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-
Manganese	mg/kg	-	-	-	-	-	-
Mercury	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-	-
Titanium	mg/kg	-	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-
Inorganics							
Chloride	mg/kg	<10	-	-	<10	-	-
Cyanide Total	mg/kg	<1	-	-	<1	-	-
Electrical conductivity (lab)	uS/cm	**20**	-	-	**20**	-	-
Sulfate as SO4 2-	mg/kg	<50	-	-	<50	-	-
Sulfate as SO4 2- (filtered)	mg/kg	-	-	-	-	-	-
Resistivity (Saturated Paste)							
Resistivity	OHM.M	**500**	-	-	**500**	-	-
Physiochemical parameters							
Moisture Content	%	**10.9**	-	-	**10.9**	-	-
pH (Lab)	pH Units	-	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	-	-	-	-	-	-
pH (CaCl2)	pH Units	**3.8**	-	-	**3.8**	-	-
TRH - NEPM 2013 Fractions							
TRH >C6 - C10	mg/kg	-	-	-	-	-	-
TRH >C10 - C16	mg/kg	-	-	-	-	-	-
TRH >C16 - C34	mg/kg	-	-	-	-	-	-
TRH >C34 - C40	mg/kg	-	-	-	-	-	-
TRH >C10 - C40 (Sum of total)	mg/kg	-	-	-	-	-	-
TRH >C6 - C10 less BTEX (F1)	mg/kg	-	-	-	-	-	-
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	-	-	-	-	-	-
TPH - NEPM 1999 Fractions							
TPH C6 - C9	mg/kg	-	-	-	-	-	-
TPH C10 - C14	mg/kg	-	-	-	-	-	-
TPH C15 - C28	mg/kg	-	-	-	-	-	-
TPH C29-C36	mg/kg	-	-	-	-	-	-
TPH C10 - C36 (Sum of total)	mg/kg	-	-	-	-	-	-
Polycyclic aromatic hydrocarbons (PAHs)							
1-Chloronaphthalene	mg/kg	-	-	-	-	-	-
2-chloronaphthalene	mg/kg	<0.5	-	-	<0.5	-	-
2-methylnaphthalene	mg/kg	<0.5	-	-	<0.5	-	-
3-methylcholanthrene	mg/kg	<0.5	-	-	<0.5	-	-
7,12-dimethylbenz(a)anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Acenaphthene	mg/kg	<0.5	-	-	<0.5	-	-
Acenaphthylene	mg/kg	<0.5	-	-	<0.5	-	-
Acetophenone	mg/kg	<0.5	-	-	<0.5	-	-
Anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Benz(a)anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(b+j+k)fluoranthene	mg/kg	<1	-	-	<1	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(a) pyrene	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(a)pyrene TEQ calc (Half)	mg/kg	**0.6**	-	-	**0.6**	-	-
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	-	-	<0.5	-	-
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	**1.2**	-	-	**1.2**	-	-
Carbazole	mg/kg	<0.5	-	-	<0.5	-	-
Chrysene	mg/kg	<0.5	-	-	<0.5	-	-
Dibenz(a,h)anthracene	mg/kg	<0.5	-	-	<0.5	-	-
Fluoranthene	mg/kg	<0.5	-	-	<0.5	-	-
Fluorene	mg/kg	<0.5	-	-	<0.5	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.5	-	-	<0.5	-	-
Phenanthrene	mg/kg	<0.5	-	-	<0.5	-	-
Pyrene	mg/kg	<0.5	-	-	<0.5	-	-
Naphthalene	mg/kg	<0.5	-	-	<0.5	-	-
PAHs (Sum of total)	mg/kg	<0.5	-	-	<0.5	-	-
Monocyclic Aromatic Hydrocarbons (MAHs)							
1,2,4-trimethylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,3,5-trimethylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
Isopropylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
n-butylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
n-propylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
p-isopropyltoluene	mg/kg	<0.5	-	-	<0.5	-	-
sec-butylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
tert-butylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
Benzene	mg/kg	<0.2	-	-	<0.2	-	-
Toluene	mg/kg	<0.5	-	-	<0.5	-	-
Ethylbenzene	mg/kg	<0.5	-	-	<0.5	-	-
Xylene (m & p)	mg/kg	<0.5	-	-	<0.5	-	-
Xylene (o)	mg/kg	<0.5	-	-	<0.5	-	-
Xylene Total	mg/kg	-	-	-	-	-	-
Total BTEX	mg/kg	-	-	-	-	-	-
Total MAH	mg/kg	-	-	-	-	-	-

		EM2202619	EM2202619	RPD	EM2202619	866176	RPD
		HB-BH01-C-0.5	QC01		HB-BH01-C-0.5	QC02	
		4/02/2022	4/02/2022		4/02/2022	4/02/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Chlorinated Hydrocarbons							
1,1,1,2-tetrachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1,1-trichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1,2,2-tetrachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1,2-trichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1-dichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,1-dichloroethene	mg/kg	<0.5	-	-	<0.5	-	-
1,2,3,4-tetrachlorobenzene	mg/kg	-	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dibromo-3-chloropropane	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dichloroethane	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
1,3-dichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
2,2-dichloropropane	mg/kg	<0.5	-	-	<0.5	-	-
Benzyl chloride	mg/kg	-	-	-	-	-	-
Bromochloromethane	mg/kg	-	-	-	-	-	-
Bromodichloromethane	mg/kg	<0.5	-	-	<0.5	-	-
Bromoform	mg/kg	<0.5	-	-	<0.5	-	-
Carbon tetrachloride	mg/kg	<0.5	-	-	<0.5	-	-
Chlorodibromomethane	mg/kg	<0.5	-	-	<0.5	-	-
Chloroethane	mg/kg	<5	-	-	<5	-	-
Chloroform	mg/kg	<0.5	-	-	<0.5	-	-
Chloromethane	mg/kg	<5	-	-	<5	-	-
cis-1,2-dichloroethene	mg/kg	<0.5	-	-	<0.5	-	-
cis-1,3-dichloropropene	mg/kg	<0.5	-	-	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	<0.5	-	-	<0.5	-	-
trans-1,3-dichloropropene	mg/kg	<0.5	-	-	<0.5	-	-
Dibromomethane	mg/kg	<0.5	-	-	<0.5	-	-
Dichloromethane	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	<0.5	-	-	<0.5	-	-
Hexachlorocyclopentadiene	mg/kg	<2.5	-	-	<2.5	-	-
Hexachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
Trichloroethene (TCE)	mg/kg	<0.5	-	-	<0.5	-	-
Tetrachloroethene (PCE)	mg/kg	<0.5	-	-	<0.5	-	-
Vinyl chloride	mg/kg	<5	-	-	<5	-	-
Halogenated Benzenes							
1,2,3,5-Tetrachlorobenzene	mg/kg	-	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,2,4,5-tetrachlorobenzene	mg/kg	-	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,2-dichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,3,5-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
1,4-dichlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
2-chlorotoluene	mg/kg	<0.5	-	-	<0.5	-	-
4-chlorotoluene	mg/kg	<0.5	-	-	<0.5	-	-
Bromobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Chlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Hexachlorobenzene	mg/kg	<1.0	-	-	<1.0	-	-
Pentachlorobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Halogenated Hydrocarbons							
1,2-dibromoethane	mg/kg	<0.5	-	-	<0.5	-	-
Bromomethane	mg/kg	<5	-	-	<5	-	-
Dichlorodifluoromethane	mg/kg	<5	-	-	<5	-	-
Iodomethane	mg/kg	<0.5	-	-	<0.5	-	-
Trichlorofluoromethane	mg/kg	<5	-	-	<5	-	-
Solvents							
Methyl Ethyl Ketone	mg/kg	<5	-	-	<5	-	-
2-hexanone (MBK)	mg/kg	<5	-	-	<5	-	-
4-Methyl-2-pentanone	mg/kg	<5	-	-	<5	-	-
Acetone	mg/kg	-	-	-	-	-	-
Allyl chloride	mg/kg	-	-	-	-	-	-
Carbon disulfide	mg/kg	<0.5	-	-	<0.5	-	-
Isophorone	mg/kg	<0.5	-	-	<0.5	-	-
Vinyl acetate	mg/kg	<5	-	-	<5	-	-
Volatile Organic Compounds (VOCs)							
1,1-dichloropropene	mg/kg	<0.5	-	-	<0.5	-	-
cis-1,4-Dichloro-2-butene	mg/kg	<0.5	-	-	<0.5	-	-
Pentachloroethane	mg/kg	<0.5	-	-	<0.5	-	-
Styrene	mg/kg	<0.5	-	-	<0.5	-	-
trans-1,4-Dichloro-2-butene	mg/kg	<0.5	-	-	<0.5	-	-
Semi Volatile Organic Compounds (SVOCs)							
2-(acetylamino) fluorene	mg/kg	<0.5	-	-	<0.5	-	-
3,3-Dichlorobenzidine	mg/kg	<0.5	-	-	<0.5	-	-
4-(dimethylamino) azobenzene	mg/kg	<0.5	-	-	<0.5	-	-
4-bromophenyl phenyl ether	mg/kg	<0.5	-	-	<0.5	-	-
4-chlorophenyl phenyl ether	mg/kg	<0.5	-	-	<0.5	-	-
4-Nitroquinoline-N-oxide	mg/kg	<0.5	-	-	<0.5	-	-
Azobenzene	mg/kg	<1	-	-	<1	-	-
Bis(2-chloroethoxy) methane	mg/kg	<0.5	-	-	<0.5	-	-
Bis(2-chloroethyl)ether	mg/kg	<0.5	-	-	<0.5	-	-
Bis(2-chloroisopropyl) ether	mg/kg	-	-	-	-	-	-
Dibenz(a.j)acridine	mg/kg	-	-	-	-	-	-
Dibenzofuran	mg/kg	<0.5	-	-	<0.5	-	-
Hexachloropropene	mg/kg	<0.5	-	-	<0.5	-	-
Methapyrilene	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosomorpholine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosopiperidine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosopyrrolidine	mg/kg	<1.0	-	-	<1.0	-	-
Phenacetin	mg/kg	<0.5	-	-	<0.5	-	-

		EM2202619	EM2202619	RPD	EM2202619	866176	RPD
		HB-BH01-C-0.5	QC01		HB-BH01-C-0.5	QC02	
		4/02/2022	4/02/2022		4/02/2022	4/02/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Per- and Poly-fluoroalkyl Substances (PFAS)							
Perfluorooctanesulfonic acid (PFOS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorooctanesulfonamide (PFOSA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoro-n-pentanoic acid (PFPeA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	-	-	-	-	-	-
Perfluorononanesulfonic acid (PFNS)	ng/kg	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorobutanesulfonic acid (PFBS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorodecanesulfonic acid (PFDS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	-	-	<0.0005	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	-	-	<0.001	-	-
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	mg/kg	<0.0002	-	-	<0.0002	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	mg/kg	<0.0005	-	-	<0.0005	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	mg/kg	<0.0002	-	-	<0.0002	-	-
Sum (PFHxS + PFOS)	mg/kg	<0.0002	-	-	<0.0002	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	-	-	-	-	-	-
Sum of WA DWER PFAS (n=10)*	ug/kg	<0.0002	-	-	<0.0002	-	-
Sum of PFAS	µg/kg	<0.2	-	-	<0.2	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	-	-	-	-	-	-
(n:2) Fluorotelomer Sulfonic Acids							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	-	-	<0.0005	-	-
Phenols							
3- & 4-Methylphenol	mg/kg	-	-	-	-	-	-
2,3,4,6-tetrachlorophenol	mg/kg	-	-	-	-	-	-
2,4,5-trichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4,6-trichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4-dichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4-dimethylphenol	mg/kg	<0.5	-	-	<0.5	-	-
2,4-dinitrophenol	mg/kg	-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2-chlorophenol	mg/kg	<0.5	-	-	<0.5	-	-
2-methylphenol	mg/kg	<0.5	-	-	<0.5	-	-
2-nitrophenol	mg/kg	<0.5	-	-	<0.5	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	<0.5	-	-	<0.5	-	-
4-nitrophenol	mg/kg	-	-	-	-	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	<0.5	-	-	<0.5	-	-
Cresol Total	mg/kg	-	-	-	-	-	-
Dinoseb	mg/kg	-	-	-	-	-	-
Pentachlorophenol	mg/kg	<1	-	-	<1	-	-
Phenol	mg/kg	<0.5	-	-	<0.5	-	-
Tetrachlorophenols	mg/kg	-	-	-	-	-	-
Phenols (Total Halogenated)	mg/kg	-	-	-	-	-	-
Phenols (Total Non Halogenated)	mg/kg	-	-	-	-	-	-
Phthalates							
Bis(2-ethylhexyl) phthalate	mg/kg	<5.0	-	-	<5.0	-	-
Butyl benzyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-
Diethylphthalate	mg/kg	<0.5	-	-	<0.5	-	-
Dimethyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-
Di-n-butyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-
Di-n-octyl phthalate	mg/kg	<0.5	-	-	<0.5	-	-

		EM2202619	EM2202619	RPD	EM2202619	866176	RPD
		HB-BH01-C-0.5	QC01		HB-BH01-C-0.5	QC02	
		4/02/2022	4/02/2022		4/02/2022	4/02/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Organochlorine Pesticides (OCPs)							
Organochlorine Pesticides (Lab Reported)	mg/kg	-	-	-	-	-	-
4,4-DDE	mg/kg	<0.5	-	-	<0.5	-	-
a-BHC	mg/kg	<0.5	-	-	<0.5	-	-
Aldrin	mg/kg	<0.5	-	-	<0.5	-	-
Aldrin + Dieldrin	mg/kg	-	-	-	-	-	-
b-BHC	mg/kg	<0.5	-	-	<0.5	-	-
Chlordane	mg/kg	-	-	-	-	-	-
Chlordane (cis)	mg/kg	-	-	-	-	-	-
Chlordane (trans)	mg/kg	-	-	-	-	-	-
d-BHC	mg/kg	<0.5	-	-	<0.5	-	-
DDD	mg/kg	<0.5	-	-	<0.5	-	-
DDT	mg/kg	<1.0	-	-	<1.0	-	-
DDT+DDE+DDD	mg/kg	-	-	-	-	-	-
Chlorobenzilate	mg/kg	<0.5	-	-	<0.5	-	-
Dieldrin	mg/kg	<0.5	-	-	<0.5	-	-
Endosulfan	mg/kg	-	-	-	-	-	-
Endosulfan I	mg/kg	<0.5	-	-	<0.5	-	-
Endosulfan II	mg/kg	<0.5	-	-	<0.5	-	-
Endosulfan sulfate	mg/kg	<0.5	-	-	<0.5	-	-
Endrin	mg/kg	<0.5	-	-	<0.5	-	-
Endrin aldehyde	mg/kg	-	-	-	-	-	-
Endrin ketone	mg/kg	-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	<0.5	-	-	<0.5	-	-
Heptachlor	mg/kg	<0.5	-	-	<0.5	-	-
Heptachlor epoxide	mg/kg	<0.5	-	-	<0.5	-	-
Methoxychlor	mg/kg	-	-	-	-	-	-
Toxaphene	mg/kg	-	-	-	-	-	-
Organophosphorous Pesticides (OPPs)							
Chlorfenvinphos	mg/kg	<0.5	-	-	<0.5	-	-
Chlorpyrifos	mg/kg	<0.5	-	-	<0.5	-	-
Chlorpyrifos-methyl	mg/kg	<0.5	-	-	<0.5	-	-
Diazinon	mg/kg	<0.5	-	-	<0.5	-	-
Dichlorvos	mg/kg	<0.5	-	-	<0.5	-	-
Dimethoate	mg/kg	<0.5	-	-	<0.5	-	-
Ethion	mg/kg	<0.5	-	-	<0.5	-	-
Fenthion	mg/kg	<0.5	-	-	<0.5	-	-
Malathion	mg/kg	<0.5	-	-	<0.5	-	-
Pirimphos-ethyl	mg/kg	<0.5	-	-	<0.5	-	-
Prothiofos	mg/kg	<0.5	-	-	<0.5	-	-
Polychlorinated Biphenyls (PCBs)							
Arochlor 1016	mg/kg	-	-	-	-	-	-
Arochlor 1221	mg/kg	-	-	-	-	-	-
Arochlor 1232	mg/kg	-	-	-	-	-	-
Arochlor 1242	mg/kg	-	-	-	-	-	-
Arochlor 1248	mg/kg	-	-	-	-	-	-
Arochlor 1254	mg/kg	-	-	-	-	-	-
Arochlor 1260	mg/kg	-	-	-	-	-	-
PCBs (Sum of total)	mg/kg	<0.1	-	-	<0.1	-	-
Herbicides							
Pronamide	mg/kg	<0.5	-	-	<0.5	-	-
Trifluralin	mg/kg	-	-	-	-	-	-
Amino Aliphatics							
N-nitrosodiethylamine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosodi-n-butylamine	mg/kg	<0.5	-	-	<0.5	-	-
N-nitrosodi-n-propylamine	mg/kg	<0.5	-	-	<0.5	-	-
N-Nitrosomethylethylamine	mg/kg	<0.5	-	-	<0.5	-	-
Amino Aromatics							
1-naphthylamine	mg/kg	<0.5	-	-	<0.5	-	-
2-naphthylamine	mg/kg	-	-	-	-	-	-
Diphenylamine	mg/kg	-	-	-	-	-	-
N-Nitrosodiphenyl & Diphenylamine	mg/kg	<1.0	-	-	<1.0	-	-
Anilines							
2-nitroaniline	mg/kg	<1.0	-	-	<1.0	-	-
3-nitroaniline	mg/kg	<1.0	-	-	<1.0	-	-
4-chloroaniline	mg/kg	<0.5	-	-	<0.5	-	-
4-nitroaniline	mg/kg	<0.5	-	-	<0.5	-	-
2-methyl-5-nitroaniline	mg/kg	<0.5	-	-	<0.5	-	-
Aniline	mg/kg	<0.5	-	-	<0.5	-	-
Nitroaromatics							
2-Picoline	mg/kg	<0.5	-	-	<0.5	-	-
4-aminobiphenyl	mg/kg	<0.5	-	-	<0.5	-	-
Pentachloronitrobenzene	mg/kg	<0.5	-	-	<0.5	-	-
Explosives							
1,3,5-Trinitrobenzene	mg/kg	<0.5	-	-	<0.5	-	-
2,4-Dinitrotoluene	mg/kg	<1.0	-	-	<1.0	-	-
2,6-dinitrotoluene	mg/kg	<1.0	-	-	<1.0	-	-
Nitrobenzene	mg/kg	<0.5	-	-	<0.5	-	-

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RPD Data Table (Soil)

		EM2202619	EM2202619	RPD	EM2202619	866176	RPD
		HB-BH01-C-0.5	QC01		HB-BH01-C-0.5	QC02	
		4/02/2022	4/02/2022		4/02/2022	4/02/2022	
		Normal	Field Duplicate		Normal	Interlab Duplicate	
		Soil	Soil		Soil	Soil	
	Unit						
Asbestos							
Organic Fibre	g/kg	No	No	-	No	-	-
Synthetic Mineral Fibre	g/kg	No	No	-	No	-	-
Approved Identifier	Comment	U.DALKIN	U.DALKIN	-	U.DALKIN	-	-
Asbestos Reported Result	Comment	-	-	-	-	No	-
Approximate Sample Mass	g	-	-	-	-	**57**	-
Sample Weight	g	**27.5**	**56.3**	**69**	**27.5**	-	-
Asbestos (Fines and Fibrous FA+AF)	%w/w	-	-	-	-	0.0000	-
Asbestos (FA) - Comment	Comment	-	-	-	-	No	-
Asbestos Fines (AF) - Comment	Comment	-	-	-	-	No	-
Description	Comment	**1**[#9]	**1**[#9]	-	**1**[#9]	-	-
Organic Fibres - Comment	Comment	-	-	-	-	**1**[#8]	-
Respirable Fibres - Comment	Comment	-	-	-	-	0	-
Synthetic Fibres - Comment	Comment	-	-	-	-	No	-
Asbestos fibres	g/kg	No	No	-	No	-	-
Asbestos from ACM in Soil	%w/w	-	-	-	-	0.0000	-
Asbestos (Trace)	Fibres	No	No	-	No	-	-
Asbestos Type	Comment	No	No	-	No	-	-
ACM - Comment	Comment	-	-	-	-	No	-
ACM (Mass)	g	-	-	-	-	0.0000	-
Asbestos in ACM (Mass)	g	-	-	-	-	0.0000	-
Asbestos (AF) - Mass	g	-	-	-	-	0.0000	-
Asbestos in AF (Mass)	g	-	-	-	-	0.0000	-
Asbestos in FA & AF (Mass)	g	-	-	-	-	0.0000	-
Asbestos (FA) - Mass	g	-	-	-	-	0.0000	-
Asbestos in FA (Mass)	g	-	-	-	-	0.0000	-

Comments
#1 No
#2 U.DALKIN
#3 Beige tan clay like soil with rock matter.
#4 -
#5 Beige tan clay like soil.
#6 No asbestos detected at the reporting limit of 0.01% w/
#7 Nil
#8 Organic fibres detected.
#9 Beige soil with rock matter.

*RPDs have only been considered where a concentration is
**Elevated RPDs are highlighted as per QAQC Profile settir
***Interlab Duplicates are matched on a per compound ba

Project Marinus_Heybridge

Jacobs

RPD Data Table (Water)

			Lab Report Number	EM2202619	EM2202619	RPD
			Field ID	HB-BH01-C	QC_01	
			Date	15/02/2022	15/02/2022	
			Sample Type	Normal	Field Duplicate	
			Matrix Type	Water	Water	
	Unit	EQL				
Metals						
Arsenic (filtered)	µg/L	1		**26**	**26**	0
Barium (filtered)	µg/L	1		**54**	**51**	6
Beryllium (filtered)	µg/L	1		<1	<1	0
Boron (filtered)	µg/L	50		<50	<50	0
Cadmium (filtered)	µg/L	0.1		<0.1	<0.1	0
Chromium (III+VI) (filtered)	µg/L	1		**5**	**5**	0
Cobalt (filtered)	µg/L	1		**18**	**17**	6
Copper (filtered)	µg/L	1		<1	<1	0
Iron (filtered)	µg/L	50		**150,000**	**152,000**	1
Lead (filtered)	µg/L	1		<1	<1	0
Manganese (filtered)	µg/L	1		**494**	**492**	0
Mercury (filtered)	µg/L	0.1		<0.1	<0.1	0
Nickel (filtered)	µg/L	1		**20**	**20**	0
Selenium (filtered)	µg/L	10		<10	<10	0
Titanium (filtered)	µg/L	10		<10	<10	0
Vanadium (filtered)	µg/L	10		<10	<10	0
Zinc (filtered)	µg/L	5		**50**	**47**	6
Inorganics						
Ammonia as N	mg/L	0.01		**0.54**	-	-
Cyanide (Free)	mg/L	0.004		<0.004	<0.004	0
Cyanide Total	mg/L	0.004		<0.004	<0.004	0
Electrical conductivity (lab)	uS/cm	1		**1,610**	-	-
Kjeldahl Nitrogen Total	mg/L	0.1		**2.2**	-	-
Nitrate & Nitrite (as N)	mg/L	0.01		<0.01	-	-
Nitrate (as N)	mg/L	0.01		<0.01	-	-
Nitrite (as N)	mg/L	0.01		<0.01	-	-
Nitrogen (Total)	mg/L	0.1		**2.2**	-	-
Sulphide	mg/L	0.1		<0.1	<0.1	0
Total Dissolved Solids	mg/L	10		**1,400**	-	-
Resistivity (Saturated Paste)						
Resistivity	OHM.M	0.01		**6.21**	-	-
Polycyclic aromatic hydrocarbons (PAHs)						
2-chloronaphthalene	µg/L	2		<2	<2	0
2-methylnaphthalene	µg/L	2		<2	<2	0
3-methylcholanthrene	µg/L	2		<2	<2	0
7,12-dimethylbenz(a)anthracene	µg/L	2		<2	<2	0
Acenaphthene	µg/L	2		<2	<2	0
Acenaphthylene	µg/L	2		<2	<2	0
Acetophenone	µg/L	2		<2	<2	0
Anthracene	µg/L	2		<2	<2	0
Benz(a)anthracene	µg/L	2		<2	<2	0
Benzo(b+j+k)fluoranthene	µg/L	4		<4	<4	0
Benzo(g,h,i)perylene	µg/L	2		<2	<2	0
Benzo(a) pyrene	µg/L	2		<2	<2	0
Benzo(a)pyrene TEQ calc (zero)	µg/L	2		<2	<2	0
Carbazole	µg/L	2		<2	<2	0
Chrysene	µg/L	2		<2	<2	0
Dibenz(a,h)anthracene	µg/L	2		<2	<2	0
Fluoranthene	µg/L	2		<2	<2	0
Fluorene	µg/L	2		<2	<2	0
Indeno(1,2,3-c,d)pyrene	µg/L	2		<2	<2	0
Phenanthrene	µg/L	2		<2	<2	0
Pyrene	µg/L	2		<2	<2	0
Naphthalene	µg/L	2		<2	<2	0
PAHs (Sum of total)	µg/L	2		<2	<2	0
Monocyclic Aromatic Hydrocarbons (MAHs)						
1,2,4-trimethylbenzene	µg/L	5		<5	-	-
1,3,5-trimethylbenzene	µg/L	5		<5	-	-
Isopropylbenzene	µg/L	5		<5	-	-
n-butylbenzene	µg/L	5		<5	-	-
n-propylbenzene	µg/L	5		<5	-	-
p-isopropyltoluene	µg/L	5		<5	-	-
sec-butylbenzene	µg/L	5		<5	-	-
tert-butylbenzene	µg/L	5		<5	-	-
Benzene	µg/L	1		<1	-	-
Toluene	µg/L	2		<2	-	-
Ethylbenzene	µg/L	2		<2	-	-
Xylene (m & p)	µg/L	2		<2	-	-
Xylene (o)	µg/L	2		<2	-	-

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RPD Data Table (Water)

			Lab Report Number	EM2202619	EM2202619	RPD
			Field ID	HB-BH01-C	QC_01	
			Date	15/02/2022	15/02/2022	
			Sample Type	Normal	Field Duplicate	
			Matrix Type	Water	Water	
	Unit	EQL				
Chlorinated Hydrocarbons						
1,1,1,2-tetrachloroethane	µg/L	5		<5	-	-
1,1,1-trichloroethane	µg/L	5		<5	-	-
1,1,2,2-tetrachloroethane	µg/L	5		<5	-	-
1,1,2-trichloroethane	µg/L	5		<5	-	-
1,1-dichloroethane	µg/L	5		<5	-	-
1,1-dichloroethene	µg/L	5		<5	-	-
1,2,3-trichloropropane	µg/L	5		<5	-	-
1,2-dibromo-3-chloropropane	µg/L	5		<5	-	-
1,2-dichloroethane	µg/L	5		<5	-	-
1,2-dichloropropane	µg/L	5		<5	-	-
1,3-dichloropropane	µg/L	5		<5	-	-
2,2-dichloropropane	µg/L	5		<5	-	-
Bromodichloromethane	µg/L	5		<5	-	-
Bromoform	µg/L	5		<5	-	-
Carbon tetrachloride	µg/L	5		<5	-	-
Chlorodibromomethane	µg/L	5		<5	-	-
Chloroethane	µg/L	50		<50	-	-
Chloroform	µg/L	5		**6**	-	-
Chloromethane	µg/L	50		<50	-	-
cis-1,2-dichloroethene	µg/L	5		<5	-	-
cis-1,3-dichloropropene	µg/L	5		<5	-	-
trans-1,2-dichloroethene	µg/L	5		<5	-	-
trans-1,3-dichloropropene	µg/L	5		<5	-	-
Dibromomethane	µg/L	5		<5	-	-
Hexachlorobutadiene	µg/L	2		<2	<2	0
Hexachlorocyclopentadiene	µg/L	10		<10	<10	0
Hexachloroethane	µg/L	2		<2	<2	0
Trichloroethene (TCE)	µg/L	5		<5	-	-
Tetrachloroethene (PCE)	µg/L	5		<5	-	-
Vinyl chloride	µg/L	50		<50	-	-
Halogenated Benzenes						
1,2,3-trichlorobenzene	µg/L	5		<5	-	-
1,2,4-trichlorobenzene	µg/L	2		<2	<2	0
1,2-dichlorobenzene	µg/L	2		<2	<2	0
1,3-dichlorobenzene	µg/L	2		<2	<2	0
1,4-dichlorobenzene	µg/L	2		<2	<2	0
2-chlorotoluene	µg/L	5		<5	-	-
4-chlorotoluene	µg/L	5		<5	-	-
Bromobenzene	µg/L	5		<5	-	-
Chlorobenzene	µg/L	5		<5	-	-
Hexachlorobenzene	µg/L	4		<4	<4	0
Pentachlorobenzene	µg/L	2		<2	<2	0
Halogenated Hydrocarbons						
1,2-dibromoethane	µg/L	5		<5	-	-
Bromomethane	µg/L	50		<50	-	-
Dichlorodifluoromethane	µg/L	50		<50	-	-
Iodomethane	µg/L	5		<5	-	-
Trichlorofluoromethane	µg/L	50		<50	-	-
Solvents						
Methyl Ethyl Ketone	µg/L	50		<50	-	-
2-hexanone (MBK)	µg/L	50		<50	-	-
4-Methyl-2-pentanone	µg/L	50		<50	-	-
Carbon disulfide	µg/L	5		<5	-	-
Isophorone	µg/L	2		<2	<2	0
Vinyl acetate	µg/L	50		<50	-	-
Volatile Organic Compounds (VOCs)						
1,1-dichloropropene	µg/L	5		<5	-	-
cis-1,4-Dichloro-2-butene	µg/L	5		<5	-	-
Pentachloroethane	µg/L	5		<5	-	-
Styrene	µg/L	5		<5	-	-
trans-1,4-Dichloro-2-butene	µg/L	5		<5	-	-
Semi Volatile Organic Compounds (SVOCs)						
2-(acetylamino) fluorene	µg/L	2		<2	<2	0
3,3-Dichlorobenzidine	µg/L	2		<2	<2	0
4-(dimethylamino) azobenzene	µg/L	2		<2	<2	0
4-bromophenyl phenyl ether	µg/L	2		<2	<2	0
4-chlorophenyl phenyl ether	µg/L	2		<2	<2	0
4-Nitroquinoline-N-oxide	µg/L	2		<2	<2	0
Azobenzene	µg/L	2		<2	<2	0
Bis(2-chloroethoxy) methane	µg/L	2		<2	<2	0
Bis(2-chloroethyl)ether	µg/L	2		<2	<2	0
Dibenzofuran	µg/L	2		<2	<2	0
Hexachloropropene	µg/L	2		<2	<2	0
Methapyrilene	µg/L	2		<2	<2	0
N-nitrosomorpholine	µg/L	2		<2	<2	0
N-nitrosopiperidine	µg/L	2		<2	<2	0
N-nitrosopyrrolidine	µg/L	4		<4	<4	0
Phenacetin	µg/L	2		<2	<2	0

Project Marinus_Heybridge

RPD Data Table (Water)

			Lab Report Number	EM2202619	EM2202619	RPD
			Field ID	HB-BH01-C	QC_01	
			Date	15/02/2022	15/02/2022	
			Sample Type	Normal	Field Duplicate	
			Matrix Type	Water	Water	
	Unit	EQL				
Per- and Poly-fluoroalkyl Substances (PFAS)						
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.01		<0.01	-	-
Perfluorooctanoic acid (PFOA)	µg/L	0.01		<0.01	-	-
Perfluorooctanesulfonamide (PFOSA)	µg/L	0.02		<0.02	-	-
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02		<0.02	-	-
Perfluoro-n-pentanoic acid (PFPeA)	µg/L	0.02		<0.02	-	-
Perfluorononanoic acid (PFNA)	µg/L	0.02		<0.02	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	0.02		<0.02	-	-
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.01		<0.01	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02		<0.02	-	-
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02		<0.02	-	-
Perfluorodecanoic acid (PFDA)	µg/L	0.02		<0.02	-	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02		<0.02	-	-
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.02		<0.02	-	-
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02		<0.02	-	-
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05		<0.05	-	-
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02		<0.02	-	-
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02		<0.02	-	-
Perfluorobutanoic acid (PFBA)	µg/L	0.1		<0.1	-	-
N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSSA)	µg/L	0.02		<0.02	-	-
N-ethyl perfluorooctane sulfonamide (N-EtFOSA)	µg/L	0.05		<0.05	-	-
N-methyl perfluorooctanesulfonamido ethanol (N-MeFOSE)	µg/L	0.05		<0.05	-	-
N-ethyl perfluorooctanesulfonamido ethanol (N-EtFOSE)	µg/L	0.05		<0.05	-	-
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	µg/L	0.05		<0.05	-	-
N-methyl perfluorooctane sulfonamido acetic acid (N-MeFOSAA)	µg/L	0.02		<0.02	-	-
Sum of WA DWER PFAS (n=10)*	µg/L	0.01		<0.01	-	-
Sum (PFHxS + PFOS)	µg/L	0.01		<0.01	-	-
Sum of PFAS	µg/L	0.01		<0.01	-	-
(n:2) Fluorotelomer Sulfonic Acids						
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05		<0.05	-	-
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.05		<0.05	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05		<0.05	-	-
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05		<0.05	-	-
Phenols						
2,4,5-trichlorophenol	µg/L	2		<2	<2	0
2,4,6-trichlorophenol	µg/L	2		<2	<2	0
2,4-dichlorophenol	µg/L	2		<2	<2	0
2,4-dimethylphenol	µg/L	2		<2	<2	0
2,6-dichlorophenol	µg/L	2		<2	<2	0
2-chlorophenol	µg/L	2		<2	<2	0
2-methylphenol	µg/L	2		<2	<2	0
2-nitrophenol	µg/L	2		<2	<2	0
4-chloro-3-methylphenol	µg/L	2		<2	<2	0
3&4-Methylphenol (m&p-cresol)	µg/L	4		<4	<4	0
Pentachlorophenol	µg/L	4		<4	<4	0
Phenol	µg/L	2		<2	<2	0
Phthalates						
Bis(2-ethylhexyl) phthalate	µg/L	10		<10	<10	0
Butyl benzyl phthalate	µg/L	2		<2	<2	0
Diethylphthalate	µg/L	2		<2	<2	0
Dimethyl phthalate	µg/L	2		<2	<2	0
Di-n-butyl phthalate	µg/L	2		<2	<2	0
Di-n-octyl phthalate	µg/L	2		<2	<2	0
Organochlorine Pesticides (OCPs)						
4,4-DDE	µg/L	2		<2	<2	0
a-BHC	µg/L	2		<2	<2	0
Aldrin	µg/L	2		<2	<2	0
Aldrin + Dieldrin	µg/L	4		<4	<4	0
b-BHC	µg/L	2		<2	<2	0
d-BHC	µg/L	2		<2	<2	0
DDD	µg/L	2		<2	<2	0
DDT	µg/L	4		<4	<4	0
DDT+DDE+DDD	µg/L	4		<4	<4	0
Chlorobenzilate	µg/L	2		<2	<2	0
Dieldrin	µg/L	2		<2	<2	0

Project Marinus_Heybridge

Jacobs

RPD Data Table (Water)

		Lab Report Number	EM2202619	EM2202619	**RPD**
		Field ID	HB-BH01-C	QC_01	
		Date	15/02/2022	15/02/2022	
		Sample Type	Normal	Field Duplicate	
		Matrix Type	Water	Water	
	Unit	**EQL**			
Endosulfan I	µg/L	2	<2	<2	0
Endosulfan II	µg/L	2	<2	<2	0
Endosulfan sulfate	µg/L	2	<2	<2	0
Endrin	µg/L	2	<2	<2	0
g-BHC (Lindane)	µg/L	2	<2	<2	0
Heptachlor	µg/L	2	<2	<2	0
Heptachlor epoxide	µg/L	2	<2	<2	0

Project Marinus_Heybridge

Jacobs

RPD Data Table (Water)

			Lab Report Number	EM2202619	EM2202619	RPD
			Field ID	HB-BH01-C	QC_01	
			Date	15/02/2022	15/02/2022	
			Sample Type	Normal	Field Duplicate	
			Matrix Type	Water	Water	
	Unit	EQL				
Organophosphorous Pesticides (OPPs)						
Chlorfenvinphos	µg/L	2		<2	<2	0
Chlorpyrifos	µg/L	2		<2	<2	0
Chlorpyrifos-methyl	µg/L	2		<2	<2	0
Diazinon	µg/L	2		<2	<2	0
Dichlorvos	µg/L	2		<2	<2	0
Dimethoate	µg/L	2		<2	<2	0
Ethion	µg/L	2		<2	<2	0
Fenthion	µg/L	2		<2	<2	0
Malathion	µg/L	2		<2	<2	0
Pirimphos-ethyl	µg/L	2		<2	<2	0
Prothiofos	µg/L	2		<2	<2	0
Herbicides						
Pronamide	µg/L	2		<2	<2	0
Amino Aliphatics						
N-nitrosodiethylamine	µg/L	2		<2	<2	0
N-nitrosodi-n-butylamine	µg/L	2		<2	<2	0
N-nitrosodi-n-propylamine	µg/L	2		<2	<2	0
N-Nitrosomethylethylamine	µg/L	2		<2	<2	0
Amino Aromatics						
1-naphthylamine	µg/L	2		<2	<2	0
N-Nitrosodiphenyl & Diphenylamine	µg/L	4		<4	<4	0
Anilines						
2-nitroaniline	µg/L	4		<4	<4	0
3-nitroaniline	µg/L	4		<4	<4	0
4-chloroaniline	µg/L	2		<2	<2	0
4-nitroaniline	µg/L	2		<2	<2	0
2-methyl-5-nitroaniline	µg/L	2		<2	<2	0
Aniline	µg/L	2		<2	<2	0
Nitroaromatics						
2-Picoline	µg/L	2		<2	<2	0
4-aminobiphenyl	µg/L	2		<2	<2	0
Pentachloronitrobenzene	µg/L	2		<2	<2	0
Explosives						
1,3,5-Trinitrobenzene	µg/L	2		<2	<2	0
2,4-Dinitrotoluene	µg/L	4		<4	<4	0
2,6-dinitrotoluene	µg/L	4		<4	<4	0
Nitrobenzene	µg/L	2		<2	<2	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 80 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Appendix G. Contaminated Land Laboratory Certificates of Analysis

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2202101**	Page	: 1 of 126
Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS360318	Date Samples Received	: 11-Feb-2022 09:35
Order number	: ----	Date Analysis Commenced	: 16-Feb-2022
C-O-C number	: ----	Issue Date	: 25-Feb-2022 16:48
Sampler	: AV		
Site	: ----		
Quote number	: ME/030/22		
No. of samples received	: 55		
No. of samples analysed	: 47		

ilac-MRA NATA
Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Vincent Emerton-Bell	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Xing Lin	Senior Organic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- ASS: EA029 (SPOCAS): Excess ANC not required because pH OX less than 6.5.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- ASS: EA029 (SPOCAS): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime ($CaCO_3$) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.

- ASS: EA003 (NATA Field and F(ox) screening): pH F(ox) Reaction Rate: 1 - Slight; 2 - Moderate; 3 - Strong; 4 - Extreme
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EA200: N/A - Not Applicable
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	----	----	7.4	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	----	----	7.1	----
pH (Fox)	----	0.1	pH Unit	----	----	----	4.7	----
Reaction Rate	----	1	Reaction Unit	----	----	----	3	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	----	204	----
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	----	----	----	7.4	----
pH OX (23B)	----	0.1	pH Unit	----	----	----	5.7	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	----	----	----	<2	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	----	----	----	<2	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	----	----	----	<2	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	----	----	----	<0.020	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	----	----	----	<0.020	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	----	----	----	<0.020	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	----	----	----	<0.020	----
Peroxide Sulfur (23De)	----	0.020	% S	----	----	----	0.035	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	----	----	----	0.035	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	----	----	----	22	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	----	----	----	0.180	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	----	----	----	0.206	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	----	----	----	0.027	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	----	----	----	13	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	----	----	----	0.021	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	----	----	----	<0.020	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	----	----	----	<0.020	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	----	----	----	<0.020	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EA029-E: Magnesium Values - Continued								
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	----	----	----	<10	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	----	----	----	<0.020	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	----	----	----	1.5	----
Net Acidity (sulfur units)	----	0.02	% S	----	----	----	<0.02	----
Net Acidity (acidity units)	----	10	mole H+ / t	----	----	----	<10	----
Liming Rate	----	1	kg CaCO3/t	----	----	----	<1	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	----	----	----	0.04	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	----	----	----	22	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	----	----	----	2	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	4.6	----	10.3	23.9	6.8
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	----	----	----	4900	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	----	----	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	----	----	No
Asbestos Type	1332-21-4	-	--	-	-	----	----	-
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	----	----	No
Organic Fibre	----	0.1	g/kg	Yes	No	----	----	Yes
Sample weight (dry)	----	0.01	g	69.7	49.3	----	----	51.5
APPROVED IDENTIFIER:	----	-	--	U.DALKIN	U.DALKIN	----	----	U.DALKIN
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	----	----	----	290	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	----	----	----	30	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	<5	<5	----
Barium	7440-39-3	10	mg/kg	<10	----	<10	20	----
Beryllium	7440-41-7	1	mg/kg	<1	----	<1	<1	----
Boron	7440-42-8	50	mg/kg	<50	----	<50	<50	----
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	<1	----
Chromium	7440-47-3	2	mg/kg	11	----	6	12	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Cobalt	7440-48-4	2	mg/kg	<2	----	<2	4	----
Copper	7440-50-8	5	mg/kg	9	----	7	10	----
Lead	7439-92-1	5	mg/kg	9	----	12	46	----
Manganese	7439-96-5	5	mg/kg	46	----	22	109	----
Nickel	7440-02-0	2	mg/kg	4	----	2	19	----
Selenium	7782-49-2	5	mg/kg	<5	----	<5	<5	----
Vanadium	7440-62-2	5	mg/kg	8	----	6	11	----
Zinc	7440-66-6	5	mg/kg	10	----	13	58	----
Titanium	7440-32-6	10	mg/kg	320	----	170	1190	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	----	<0.1	<0.1	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	<1	<1	<1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	<5	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	<5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	<5	<5	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	<5	<5	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	<5	<5	<5
Chloromethane	74-87-3	5	mg/kg	----	----	<5	<5	<5
Vinyl chloride	75-01-4	5	mg/kg	----	----	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	----	----	<5	<5	<5
Chloroethane	75-00-3	5	mg/kg	----	----	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	<5	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	----	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.2**	**1.2**	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	1	mg/kg	----	----	<1	<1	<1
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
					Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		----	----	<1	<1	<1
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
3-Methylcholanthrene	56-49-5	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
^ Sum of PAHs	----	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	**1.2**	**1.2**	**1.2**
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Diethyl phthalate	84-66-2	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Di-n-butyl phthalate	84-74-2	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Butyl benzyl phthalate	85-68-7	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg		----	----	<5.0	<5.0	<5.0
Di-n-octylphthalate	117-84-0	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg		----	----	<1.0	<1.0	<1.0
N-Nitrosomorpholine	59-89-2	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		----	----	<1.0	<1.0	<1.0
Methapyrilene	91-80-5	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Acetophenone	98-86-2	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Nitrobenzene	98-95-3	0.5	mg/kg		----	----	<0.5	<0.5	<0.5
Isophorone	78-59-1	0.5	mg/kg		----	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued								
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	----	----	<1.0	<1.0	<1.0
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	----	----	<1.0	<1.0	<1.0
1-Naphthylamine	134-32-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Azobenzene	103-33-3	1	mg/kg	----	----	<1	<1	<1
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Phenacetin	62-44-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pronamide	23950-58-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Chlorobenzilate	510-15-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Hexachloroethane	67-72-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Hexachloropropylene	1888-71-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	----	----	<2.5	<2.5	<2.5
Pentachlorobenzene	608-93-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	----	----	<1.0	<1.0	<1.0
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Chloroaniline	106-47-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Nitroaniline	88-74-4	1.0	mg/kg	----	----	<1.0	<1.0	<1.0
3-Nitroaniline	99-09-2	1.0	mg/kg	----	----	<1.0	<1.0	<1.0

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP075H: Anilines and Benzidines - Continued								
Dibenzofuran	132-64-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Carbazole	86-74-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4.4`-DDE	72-55-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4.4`-DDD	72-54-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4.4`-DDT	50-29-3	1.0	mg/kg	----	----	<1.0	<1.0	<1.0
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dimethoate	60-51-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Malathion	121-75-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	<1	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	----	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**80.9**	**83.7**	**92.6**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	**103**	**106**	**106**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	**101**	**107**	**103**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	**89.8**	**89.8**	**94.3**
Toluene-D8	2037-26-5	0.5	%	----	----	**93.4**	**85.1**	**103**
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	**98.3**	**69.7**	**108**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**79.0**	----	**82.2**	**94.2**	**82.7**
2-Chlorophenol-D4	93951-73-6	0.5	%	**76.9**	----	**79.3**	**86.8**	**80.0**
2.4.6-Tribromophenol	118-79-6	0.5	%	**70.8**	----	**78.5**	**89.0**	**78.9**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**84.1**	----	**86.3**	**98.2**	**89.2**
Anthracene-d10	1719-06-8	0.5	%	**86.0**	----	**90.4**	**77.9**	**91.5**
4-Terphenyl-d14	1718-51-0	0.5	%	**85.7**	----	**89.0**	**88.0**	**91.0**
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.5	%	----	----	**118**	**119**	**110**
Phenol-d6	13127-88-3	0.5	%	----	----	**91.5**	**90.6**	**92.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH04-C-0.1	HB-BH04-C-1	HB-BH04-C-1.5	HB-BH04-C-2	HB-BH05-C-0.1
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-001	EM2202101-002	EM2202101-003	EM2202101-004	EM2202101-005
					Result	Result	Result	Result	Result
EP075S: Acid Extractable Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	86.8	81.4	88.5
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	88.8	79.4	88.2
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		----	----	91.4	84.2	92.1
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		----	----	78.9	73.7	78.2
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	89.3	82.2	89.3
Anthracene-d10	1719-06-8	0.5	%		----	----	92.3	62.5	92.8
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	95.5	72.0	96.7
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		85.1	----	86.3	86.3	----
Toluene-D8	2037-26-5	0.2	%		84.1	----	87.9	68.6	----
4-Bromofluorobenzene	460-00-4	0.2	%		97.3	----	107	67.8	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	----	----	117
13C8-PFOA	----	0.0002	%		----	----	----	----	98.4

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	5.8	----	----	7.2
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	45	----	----	42
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	8.8	6.8	12.9	9.5	10.3
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	----	22200	----	----	23800
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	No	----	No
Asbestos (Trace)	1332-21-4	5	Fibres	----	No	No	----	No
Asbestos Type	1332-21-4	-	--	----	-	-	----	-
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	No	----	No
Organic Fibre	----	0.1	g/kg	----	No	Yes	----	No
Sample weight (dry)	----	0.01	g	----	61.3	36.1	----	58.0
APPROVED IDENTIFIER:	----	-	--	----	U.DALKIN	U.DALKIN	----	U.DALKIN
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	----	70	----	----	40
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	----	<10	----	----	30
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	5	<5	----	23	16
Barium	7440-39-3	10	mg/kg	20	<10	----	<10	10
Beryllium	7440-41-7	1	mg/kg	<1	<1	----	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	----	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	9	5	----	3	14
Cobalt	7440-48-4	2	mg/kg	6	<2	----	<2	<2
Copper	7440-50-8	5	mg/kg	26	13	----	<5	<5
Lead	7439-92-1	5	mg/kg	95	29	----	<5	<5
Manganese	7439-96-5	5	mg/kg	234	<5	----	<5	20
Nickel	7440-02-0	2	mg/kg	15	<2	----	<2	2
Selenium	7782-49-2	5	mg/kg	<5	<5	----	<5	<5
Vanadium	7440-62-2	5	mg/kg	7	8	----	15	10
Zinc	7440-66-6	5	mg/kg	140	11	----	16	<5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Titanium	7440-32-6	10	mg/kg	**260**	**170**	**----**	**40**	**50**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	**----**	<0.1	**0.2**
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	**----**	**----**	<1	**----**	**----**
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	**----**	**----**	<0.1	**----**	**----**
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
beta-BHC	319-85-7	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
gamma-BHC	58-89-9	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
delta-BHC	319-86-8	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Heptachlor	76-44-8	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Aldrin	309-00-2	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Heptachlor epoxide	1024-57-3	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
^ Total Chlordane (sum)	----	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
trans-Chlordane	5103-74-2	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
alpha-Endosulfan	959-98-8	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
cis-Chlordane	5103-71-9	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Dieldrin	60-57-1	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
4.4`-DDE	72-55-9	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Endrin	72-20-8	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
beta-Endosulfan	33213-65-9	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
4.4`-DDD	72-54-8	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Endrin aldehyde	7421-93-4	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Endosulfan sulfate	1031-07-8	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
4.4`-DDT	50-29-3	0.2	mg/kg	**----**	**----**	<0.2	**----**	**----**
Endrin ketone	53494-70-5	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
Methoxychlor	72-43-5	0.2	mg/kg	**----**	**----**	<0.2	**----**	**----**
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	**----**	**----**	<0.05	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	<0.5	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	<0.5	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	<0.5	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	<0.5	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	<0.5	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	<0.5	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	<0.5	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	<5	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	<5	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	<5	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	<5	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	<0.5	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	<0.5	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	<0.5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	<5	----	----
Chloromethane	74-87-3	5	mg/kg	----	----	<5	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	<5	----	----
Bromomethane	74-83-9	5	mg/kg	----	----	<5	----	----
Chloroethane	75-00-3	5	mg/kg	----	----	<5	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	<5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	<0.5	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	<0.5	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	<0.5	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	<0.5	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	<0.5	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	<0.5	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	<0.5	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	<0.5	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	<0.5	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	<0.5	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	<0.5	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	<0.5	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	<0.5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	<0.5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	<0.5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	<0.5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	<0.5	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	<0.5	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	<0.5	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	<0.5	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	<0.5	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	<0.5	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	<0.5	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	<0.5	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	<0.5	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	<0.5	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	<0.5	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	<1	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	<2	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	**1.2**	**1.2**
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds - Continued								
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	----	<0.5	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachlorophenol	87-86-5	1	mg/kg	----	----	<1	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	----	<0.5	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	----	----	<1	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
^ Sum of PAHs	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	----	----	<0.5	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	----	----	<0.5	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	----	----	<0.5	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	----	----	<0.5	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	----	----	<5.0	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	----	----	<0.5	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	----	----	<1.0	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	----	----	<1.0	----	----
Methapyrilene	91-80-5	0.5	mg/kg	----	----	<0.5	----	----
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	----	----	<0.5	----	----
Acetophenone	98-86-2	0.5	mg/kg	----	----	<0.5	----	----
Nitrobenzene	98-95-3	0.5	mg/kg	----	----	<0.5	----	----
Isophorone	78-59-1	0.5	mg/kg	----	----	<0.5	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	----	----	<1.0	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	----	----	<1.0	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg	----	----	<0.5	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	----	----	<0.5	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	----	----	<0.5	----	----
Azobenzene	103-33-3	1	mg/kg	----	----	<1	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	----	----	<0.5	----	----
Phenacetin	62-44-2	0.5	mg/kg	----	----	<0.5	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
					Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued									
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		----	----	<0.5	----	----
Pronamide	23950-58-5	0.5	mg/kg		----	----	<0.5	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		----	----	<0.5	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		----	----	<0.5	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		----	----	<0.5	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		----	----	<0.5	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		----	----	<0.5	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		----	----	<0.5	----	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		----	----	<0.5	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		----	----	<0.5	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		----	----	<0.5	----	----
Hexachloroethane	67-72-1	0.5	mg/kg		----	----	<0.5	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		----	----	<0.5	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		----	----	<0.5	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		----	----	<0.5	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		----	----	<2.5	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		----	----	<0.5	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		----	----	<1.0	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		----	----	<0.5	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg		----	----	<0.5	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg		----	----	<1.0	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg		----	----	<1.0	----	----
Dibenzofuran	132-64-9	0.5	mg/kg		----	----	<0.5	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg		----	----	<0.5	----	----
Carbazole	86-74-8	0.5	mg/kg		----	----	<0.5	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg		----	----	<0.5	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg		----	----	<0.5	----	----
beta-BHC	319-85-7	0.5	mg/kg		----	----	<0.5	----	----
gamma-BHC	58-89-9	0.5	mg/kg		----	----	<0.5	----	----
delta-BHC	319-86-8	0.5	mg/kg		----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
Heptachlor	76-44-8	0.5	mg/kg	----	----	<0.5	----	----
Aldrin	309-00-2	0.5	mg/kg	----	----	<0.5	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	----	<0.5	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	----	<0.5	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	----	----	<0.5	----	----
Dieldrin	60-57-1	0.5	mg/kg	----	----	<0.5	----	----
Endrin	72-20-8	0.5	mg/kg	----	----	<0.5	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	----	<0.5	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	----	----	<0.5	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	----	<0.5	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	----	----	<1.0	----	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	----	<0.5	----	----
Dimethoate	60-51-5	0.5	mg/kg	----	----	<0.5	----	----
Diazinon	333-41-5	0.5	mg/kg	----	----	<0.5	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	----	<0.5	----	----
Malathion	121-75-5	0.5	mg/kg	----	----	<0.5	----	----
Fenthion	55-38-9	0.5	mg/kg	----	----	<0.5	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg	----	----	<0.5	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	----	----	<0.5	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg	----	----	<0.5	----	----
Prothiofos	34643-46-4	0.5	mg/kg	----	----	<0.5	----	----
Ethion	563-12-2	0.5	mg/kg	----	----	<0.5	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	----	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		----	----	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		----	----	<0.001	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	----	<0.0002	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		----	----	<0.0002	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		----	----	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		----	----	<0.0002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		----	----	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		----	----	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	----	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	----	<0.0005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	----	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	----	<0.0005	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	----	<0.0002	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
					Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	<0.0002	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	<0.0002	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	86.8	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	112	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	118	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	----	86.4	----	----
Toluene-D8	2037-26-5	0.5	%		----	----	90.6	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		----	----	93.7	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		84.0	78.9	97.0	92.5	97.4
2-Chlorophenol-D4	93951-73-6	0.5	%		82.4	76.1	92.6	88.5	91.7
2.4.6-Tribromophenol	118-79-6	0.5	%		78.8	74.5	71.2	54.3	49.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		91.7	85.0	97.8	95.8	98.5
Anthracene-d10	1719-06-8	0.5	%		94.9	87.9	116	115	119
4-Terphenyl-d14	1718-51-0	0.5	%		93.2	85.3	112	113	116
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		----	----	116	----	----
Phenol-d6	13127-88-3	0.5	%		----	----	95.0	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	96.7	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	102	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		----	----	96.8	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		----	----	90.4	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	89.1	----	----
Anthracene-d10	1719-06-8	0.5	%		----	----	109	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	106	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		92.8	76.8	----	95.9	86.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH05-C-0.5	HB-BH05-C-1	HB-BH06-C-0.5	HB-BH06-C-1	HB-BH06-C-2
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-006	EM2202101-007	EM2202101-008	EM2202101-009	EM2202101-010
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.2	%		**87.9**	**67.0**	**----**	**91.7**	**80.5**
4-Bromofluorobenzene	460-00-4	0.2	%		**100**	**80.9**	**----**	**103**	**91.5**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**----**	**----**	**116**	**----**	**----**
13C8-PFOA	----	0.0002	%		**----**	**----**	**106**	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	8.0	----	----	----	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	----	3.7	----	----
pH (Fox)	----	0.1	pH Unit	----	----	2.0	----	----
Reaction Rate	----	1	Reaction Unit	----	----	2	----	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	271	----	----	----	----
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	----	----	3.9	----	----
pH OX (23B)	----	0.1	pH Unit	----	----	2.9	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	----	----	54	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	----	----	77	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	----	----	23	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	----	----	0.087	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	----	----	0.124	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	----	----	0.037	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	----	----	0.081	----	----
Peroxide Sulfur (23De)	----	0.020	% S	----	----	0.100	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	----	----	<0.020	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	----	----	11	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	----	----	0.027	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	----	----	0.027	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	----	----	<0.020	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	----	----	<10	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	----	----	<0.020	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	----	----	<0.020	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	----	----	<0.020	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	----	----	<0.020	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EA029-E: Magnesium Values - Continued								
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	----	----	<10	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	----	----	<0.020	----	----
EA029-G: Retained Acidity								
HCl Extractable Sulfur (20Be)	----	0.020	% S	----	----	**0.075**	----	----
Net Acid Soluble Sulfur (20Je)	----	0.020	% S	----	----	<0.020	----	----
acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	----	----	<10	----	----
sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.020	% pyrite S	----	----	<0.020	----	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	----	----	**1.5**	----	----
Net Acidity (sulfur units)	----	0.02	% S	----	----	**0.10**	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	----	----	**60**	----	----
Liming Rate	----	1	kg CaCO3/t	----	----	**4**	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	----	----	**0.10**	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	----	----	**60**	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	----	----	**4**	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**11.8**	**12.7**	**18.6**	**9.0**	----
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	**3690**	----	----	----	----
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	**12**	----	----	----	----
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	**2.49**	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	**No**	----	**No**
Asbestos (Trace)	1332-21-4	5	Fibres	----	----	**No**	----	**No**
Asbestos Type	1332-21-4	-	--	----	----	**-**	----	**-**
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	**No**	----	**No**
Organic Fibre	----	0.1	g/kg	----	----	**Yes**	----	**Yes**
Sample weight (dry)	----	0.01	g	----	----	**447**	----	**486**
APPROVED IDENTIFIER:	----	-	--	----	----	**U.DALKIN**	----	**U.DALKIN**
ED006: Exchangeable Cations on Alkaline Soils								
ø Exchangeable Calcium	----	0.2	meq/100g	**7.0**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
ED006: Exchangeable Cations on Alkaline Soils - Continued								
ø Exchangeable Magnesium	----	0.2	meq/100g	0.8	----	----	----	----
ø Exchangeable Potassium	----	0.2	meq/100g	0.7	----	----	----	----
ø Exchangeable Sodium	----	0.2	meq/100g	0.4	----	----	----	----
ø Cation Exchange Capacity	----	0.2	meq/100g	9.0	----	----	----	----
ø Exchangeable Calcium Percent	----	0.2	%	78.1	----	----	----	----
ø Exchangeable Magnesium Percent	----	0.2	%	8.9	----	----	----	----
ø Exchangeable Potassium Percent	----	0.2	%	8.1	----	----	----	----
ø Exchangeable Sodium Percent	----	0.2	%	4.9	----	----	----	----
ø Calcium/Magnesium Ratio	----	0.2	-	8.7	----	----	----	----
ø Magnesium/Potassium Ratio	----	0.2	-	1.1	----	----	----	----
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	330	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	10	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	<5	----
Barium	7440-39-3	10	mg/kg	40	30	----	<10	----
Beryllium	7440-41-7	1	mg/kg	<1	<1	----	<1	----
Boron	7440-42-8	50	mg/kg	<50	<50	----	<50	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	----
Chromium	7440-47-3	2	mg/kg	17	15	----	<2	----
Cobalt	7440-48-4	2	mg/kg	4	4	----	<2	----
Copper	7440-50-8	5	mg/kg	29	30	----	<5	----
Lead	7439-92-1	5	mg/kg	120	203	----	10	----
Manganese	7439-96-5	5	mg/kg	130	144	----	<5	----
Nickel	7440-02-0	2	mg/kg	20	20	----	<2	----
Selenium	7782-49-2	5	mg/kg	<5	<5	----	<5	----
Vanadium	7440-62-2	5	mg/kg	17	15	----	<5	----
Zinc	7440-66-6	5	mg/kg	68	85	----	<5	----
Titanium	7440-32-6	10	mg/kg	1300	1650	----	2220	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.6	1.1	----	0.9	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	<1	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	----	----	<0.05	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	<0.5	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	<0.5	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	<0.5	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	<0.5	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	<0.5	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	<0.5	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	<0.5	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	<5	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	<5	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	<5	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	<5	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	<0.5	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	<0.5	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	<0.5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	<5	----	----
Chloromethane	74-87-3	5	mg/kg	----	----	<5	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	<5	----	----
Bromomethane	74-83-9	5	mg/kg	----	----	<5	----	----
Chloroethane	75-00-3	5	mg/kg	----	----	<5	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	<5	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	<0.5	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	<0.5	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	<0.5	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	<0.5	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	<0.5	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	<0.5	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	<0.5	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	<0.5	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	<0.5	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	<0.5	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	<0.5	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	<0.5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	<0.5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	<0.5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	<0.5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	<0.5	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	<0.5	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	<0.5	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	<0.5	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	<0.5	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	<0.5	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	<0.5	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	<0.5	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	<0.5	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	<0.5	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	<0.5	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	<1	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	<2	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	**1.2**	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	----	<0.5	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds - Continued								
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachlorophenol	87-86-5	1	mg/kg	----	----	<1	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	----	<0.5	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	----	----	<1	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
^ Sum of PAHs	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	----	----	<0.5	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	----	----	<0.5	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP075C: Phthalate Esters - Continued								
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	----	----	<0.5	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	----	----	<5.0	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	----	----	<0.5	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	----	----	<1.0	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	----	----	<0.5	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	----	----	<1.0	----	----
Methapyrilene	91-80-5	0.5	mg/kg	----	----	<0.5	----	----
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	----	----	<0.5	----	----
Acetophenone	98-86-2	0.5	mg/kg	----	----	<0.5	----	----
Nitrobenzene	98-95-3	0.5	mg/kg	----	----	<0.5	----	----
Isophorone	78-59-1	0.5	mg/kg	----	----	<0.5	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	----	----	<1.0	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	----	----	<1.0	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg	----	----	<0.5	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	----	----	<0.5	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	----	----	<0.5	----	----
Azobenzene	103-33-3	1	mg/kg	----	----	<1	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	----	----	<0.5	----	----
Phenacetin	62-44-2	0.5	mg/kg	----	----	<0.5	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	----	----	<0.5	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	----	----	<0.5	----	----
Pronamide	23950-58-5	0.5	mg/kg	----	----	<0.5	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	----	----	<0.5	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg	----	----	<0.5	----	----
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP075F: Haloethers - Continued								
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	----	----	<0.5	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	----	----	<0.5	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	----	----	<0.5	----	----
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	<0.5	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	<0.5	----	----
Hexachloroethane	67-72-1	0.5	mg/kg	----	----	<0.5	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	<0.5	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg	----	----	<0.5	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	<0.5	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	----	----	<2.5	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg	----	----	<0.5	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	----	----	<1.0	----	----
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	----	----	<0.5	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg	----	----	<0.5	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	----	----	<1.0	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg	----	----	<1.0	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	----	----	<0.5	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	----	----	<0.5	----	----
Carbazole	86-74-8	0.5	mg/kg	----	----	<0.5	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	----	<0.5	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	----	<0.5	----	----
beta-BHC	319-85-7	0.5	mg/kg	----	----	<0.5	----	----
gamma-BHC	58-89-9	0.5	mg/kg	----	----	<0.5	----	----
delta-BHC	319-86-8	0.5	mg/kg	----	----	<0.5	----	----
Heptachlor	76-44-8	0.5	mg/kg	----	----	<0.5	----	----
Aldrin	309-00-2	0.5	mg/kg	----	----	<0.5	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	----	<0.5	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	----	<0.5	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	----	----	<0.5	----	----
Dieldrin	60-57-1	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
					Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued									
Endrin	72-20-8	0.5	mg/kg		----	----	<0.5	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg		----	----	<0.5	----	----
4.4`-DDD	72-54-8	0.5	mg/kg		----	----	<0.5	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg		----	----	<0.5	----	----
4.4`-DDT	50-29-3	1.0	mg/kg		----	----	<1.0	----	----
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg		----	----	<0.5	----	----
Dimethoate	60-51-5	0.5	mg/kg		----	----	<0.5	----	----
Diazinon	333-41-5	0.5	mg/kg		----	----	<0.5	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg		----	----	<0.5	----	----
Malathion	121-75-5	0.5	mg/kg		----	----	<0.5	----	----
Fenthion	55-38-9	0.5	mg/kg		----	----	<0.5	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		----	----	<0.5	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		----	----	<0.5	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		----	----	<0.5	----	----
Prothiofos	34643-46-4	0.5	mg/kg		----	----	<0.5	----	----
Ethion	563-12-2	0.5	mg/kg		----	----	<0.5	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	<10	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	**130**	----	<100	----
C29 - C36 Fraction	----	100	mg/kg		**220**	**180**	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**220**	**310**	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg		**220**	**260**	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg		**180**	**130**	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		**400**	**390**	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	<50	----
EP080: BTEXN									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	----	<0.2	----
^ **Total Xylenes**	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	<1	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	<0.0002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	<0.0002	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**86.6**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP01-C-0.1	QC001_280122	HB-TP01-C-0.5	HB-TP01-C-1	HB-TP02-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-011	EM2202101-012	EM2202101-013	EM2202101-014	EM2202101-016
					Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	108	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	101	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	----	92.2	----	----
Toluene-D8	2037-26-5	0.5	%		----	----	95.6	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		----	----	100	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		83.1	81.8	79.2	83.2	----
2-Chlorophenol-D4	93951-73-6	0.5	%		81.2	81.3	79.4	82.2	----
2.4.6-Tribromophenol	118-79-6	0.5	%		73.5	79.6	77.8	80.0	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		88.9	90.2	90.0	91.0	----
Anthracene-d10	1719-06-8	0.5	%		93.0	93.1	93.5	95.4	----
4-Terphenyl-d14	1718-51-0	0.5	%		89.8	83.1	83.3	89.6	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		----	----	125	----	----
Phenol-d6	13127-88-3	0.5	%		----	----	92.2	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	89.6	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	86.6	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		----	----	91.2	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		----	----	77.4	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	88.3	----	----
Anthracene-d10	1719-06-8	0.5	%		----	----	93.0	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	96.7	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		75.7	82.7	----	80.5	----
Toluene-D8	2037-26-5	0.2	%		68.0	79.8	----	73.9	----
4-Bromofluorobenzene	460-00-4	0.2	%		79.6	89.4	----	85.6	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	118	----	----
13C8-PFOA	----	0.0002	%		----	----	98.8	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	**7.3**	----	----	----	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	**4.6**	----	----	----
pH (Fox)	----	0.1	pH Unit	----	**2.7**	----	----	----
Reaction Rate	----	1	Reaction Unit	----	**3**	----	----	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	**49**	----	----	----	----
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	----	**6.8**	----	----	----
pH OX (23B)	----	0.1	pH Unit	----	**5.5**	----	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	----	<2	----	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	----	<2	----	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	----	<2	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	----	<0.020	----	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	----	<0.020	----	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	----	<0.020	----	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	----	<0.020	----	----	----
Peroxide Sulfur (23De)	----	0.020	% S	----	<0.020	----	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	----	<0.020	----	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	----	<10	----	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	----	**0.302**	----	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	----	**0.302**	----	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	----	<0.020	----	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	----	<0.020	----	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	----	<0.020	----	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	----	<0.020	----	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	----	<0.020	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EA029-E: Magnesium Values - Continued								
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	----	<0.020	----	----	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	----	1.5	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	----	<0.02	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	----	<10	----	----	----
Liming Rate	----	1	kg CaCO3/t	----	<1	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	----	<0.02	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	----	<10	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	----	<1	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	7.9	12.4	14.2	5.1	----
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	20400	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	----	No	----	No	No
Asbestos Type	1332-21-4	-	--	----	-	----	-	-
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	No	No
Organic Fibre	----	0.1	g/kg	----	Yes	----	Yes	No
Sample weight (dry)	----	0.01	g	----	418	----	42.3	58.4
APPROVED IDENTIFIER:	----	-	--	----	U.DALKIN	----	U.DALKIN	U.DALKIN
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	60	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	<10	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	5	----	----
Barium	7440-39-3	10	mg/kg	<10	----	<10	----	----
Beryllium	7440-41-7	1	mg/kg	<1	----	<1	----	----
Boron	7440-42-8	50	mg/kg	<50	----	<50	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	----	----
Chromium	7440-47-3	2	mg/kg	5	----	7	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Cobalt	7440-48-4	2	mg/kg	<2	----	<2	----	----
Copper	7440-50-8	5	mg/kg	<5	----	6	----	----
Lead	7439-92-1	5	mg/kg	<5	----	99	----	----
Manganese	7439-96-5	5	mg/kg	28	----	14	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	<2	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	<5	----	----
Vanadium	7440-62-2	5	mg/kg	5	----	8	----	----
Zinc	7440-66-6	5	mg/kg	<5	----	16	----	----
Titanium	7440-32-6	10	mg/kg	40	----	40	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	<1	----	<1	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	<0.05	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg		----	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg		----	<0.2	----	<0.2	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		----	<0.05	----	<0.05	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		----	<0.05	----	<0.05	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Styrene	100-42-5	0.5	mg/kg		----	<0.5	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	----	<0.5	----
Isopropylbenzene	98-82-8	0.5	mg/kg		----	<0.5	----	<0.5	----
n-Propylbenzene	103-65-1	0.5	mg/kg		----	<0.5	----	<0.5	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		----	<0.5	----	<0.5	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		----	<0.5	----	<0.5	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		----	<0.5	----	<0.5	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		----	<0.5	----	<0.5	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		----	<0.5	----	<0.5	----
n-Butylbenzene	104-51-8	0.5	mg/kg		----	<0.5	----	<0.5	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		----	<5	----	<5	----
2-Butanone (MEK)	78-93-3	5	mg/kg		----	<5	----	<5	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		----	<5	----	<5	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		----	<5	----	<5	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		----	<0.5	----	<0.5	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		----	<0.5	----	<0.5	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		----	<0.5	----	<0.5	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		----	<0.5	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	<0.5	----	<0.5	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	<0.5	----	<0.5	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	<5	----	<5	----
Chloromethane	74-87-3	5	mg/kg	----	<5	----	<5	----
Vinyl chloride	75-01-4	5	mg/kg	----	<5	----	<5	----
Bromomethane	74-83-9	5	mg/kg	----	<5	----	<5	----
Chloroethane	75-00-3	5	mg/kg	----	<5	----	<5	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	<5	----	<5	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Iodomethane	74-88-4	0.5	mg/kg	----	<0.5	----	<0.5	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	<0.5	----	<0.5	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	<0.5	----	<0.5	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	<0.5	----	<0.5	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	<0.5	----	<0.5	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	<0.5	----	<0.5	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	<0.5	----	<0.5	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	<0.5	----	<0.5	----
Trichloroethene	79-01-6	0.5	mg/kg	----	<0.5	----	<0.5	----
Dibromomethane	74-95-3	0.5	mg/kg	----	<0.5	----	<0.5	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	<0.5	----	<0.5	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	<0.5	----	<0.5	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	<0.5	----	<0.5	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	<0.5	----	<0.5	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	<0.5	----	<0.5	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	<0.5	----	<0.5	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	<0.5	----	<0.5	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	<0.5	----	<0.5	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Bromobenzene	108-86-1	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	<0.5	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	<0.5	----	<0.5	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	<0.5	----	<0.5	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	<0.5	----	<0.5	----
Bromoform	75-25-2	0.5	mg/kg	----	<0.5	----	<0.5	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	<0.5	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.2**	----	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	<0.5	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	<0.5	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Pentachlorophenol	87-86-5	1	mg/kg	----	<1	----	<1	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	<0.5	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
					Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		----	<1	----	<1	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		----	<0.5	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	----	<0.5	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg		----	<0.5	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	<0.5	----	<0.5	----
^ Sum of PAHs	----	0.5	mg/kg		----	<0.5	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	<0.5	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	**0.6**	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	**1.2**	----	**1.2**	----
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Diethyl phthalate	84-66-2	0.5	mg/kg		----	<0.5	----	<0.5	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg		----	<0.5	----	<0.5	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg		----	<0.5	----	<0.5	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg		----	<5.0	----	<5.0	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg		----	<0.5	----	<0.5	----
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg		----	<0.5	----	<0.5	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg		----	<0.5	----	<0.5	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg		----	<1.0	----	<1.0	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg		----	<0.5	----	<0.5	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg		----	<0.5	----	<0.5	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		----	<0.5	----	<0.5	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		----	<0.5	----	<0.5	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		----	<1.0	----	<1.0	----
Methapyrilene	91-80-5	0.5	mg/kg		----	<0.5	----	<0.5	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		----	<0.5	----	<0.5	----
Acetophenone	98-86-2	0.5	mg/kg		----	<0.5	----	<0.5	----
Nitrobenzene	98-95-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Isophorone	78-59-1	0.5	mg/kg		----	<0.5	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
					Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued									
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg		----	<1.0	----	<1.0	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg		----	<1.0	----	<1.0	----
1-Naphthylamine	134-32-7	0.5	mg/kg		----	<0.5	----	<0.5	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		----	<0.5	----	<0.5	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		----	<0.5	----	<0.5	----
Azobenzene	103-33-3	1	mg/kg		----	<1	----	<1	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg		----	<0.5	----	<0.5	----
Phenacetin	62-44-2	0.5	mg/kg		----	<0.5	----	<0.5	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg		----	<0.5	----	<0.5	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		----	<0.5	----	<0.5	----
Pronamide	23950-58-5	0.5	mg/kg		----	<0.5	----	<0.5	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		----	<0.5	----	<0.5	----
Chlorobenzilate	510-15-6	0.5	mg/kg		----	<0.5	----	<0.5	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		----	<0.5	----	<0.5	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		----	<0.5	----	<0.5	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		----	<0.5	----	<0.5	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		----	<0.5	----	<0.5	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		----	<0.5	----	<0.5	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		----	<0.5	----	<0.5	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		----	<0.5	----	<0.5	----
Hexachloroethane	67-72-1	0.5	mg/kg		----	<0.5	----	<0.5	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		----	<0.5	----	<0.5	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		----	<0.5	----	<0.5	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		----	<2.5	----	<2.5	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		----	<0.5	----	<0.5	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		----	<1.0	----	<1.0	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		----	<0.5	----	<0.5	----
4-Chloroaniline	106-47-8	0.5	mg/kg		----	<0.5	----	<0.5	----
2-Nitroaniline	88-74-4	1.0	mg/kg		----	<1.0	----	<1.0	----
3-Nitroaniline	99-09-2	1.0	mg/kg		----	<1.0	----	<1.0	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EP075H: Anilines and Benzidines - Continued								
Dibenzofuran	132-64-9	0.5	mg/kg	----	<0.5	----	<0.5	----
4-Nitroaniline	100-01-6	0.5	mg/kg	----	<0.5	----	<0.5	----
Carbazole	86-74-8	0.5	mg/kg	----	<0.5	----	<0.5	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	<0.5	----	<0.5	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	<0.5	----	<0.5	----
beta-BHC	319-85-7	0.5	mg/kg	----	<0.5	----	<0.5	----
gamma-BHC	58-89-9	0.5	mg/kg	----	<0.5	----	<0.5	----
delta-BHC	319-86-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Heptachlor	76-44-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Aldrin	309-00-2	0.5	mg/kg	----	<0.5	----	<0.5	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	<0.5	----	<0.5	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	<0.5	----	<0.5	----
4.4`-DDE	72-55-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Dieldrin	60-57-1	0.5	mg/kg	----	<0.5	----	<0.5	----
Endrin	72-20-8	0.5	mg/kg	----	<0.5	----	<0.5	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	<0.5	----	<0.5	----
4.4`-DDD	72-54-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	<0.5	----	<0.5	----
4.4`-DDT	50-29-3	1.0	mg/kg	----	<1.0	----	<1.0	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Dimethoate	60-51-5	0.5	mg/kg	----	<0.5	----	<0.5	----
Diazinon	333-41-5	0.5	mg/kg	----	<0.5	----	<0.5	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	<0.5	----	<0.5	----
Malathion	121-75-5	0.5	mg/kg	----	<0.5	----	<0.5	----
Fenthion	55-38-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Chlorpyrifos	2921-88-2	0.5	mg/kg	----	<0.5	----	<0.5	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	----	<0.5	----	<0.5	----
Chlorfenvinphos	470-90-6	0.5	mg/kg	----	<0.5	----	<0.5	----
Prothiofos	34643-46-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Ethion	563-12-2	0.5	mg/kg	----	<0.5	----	<0.5	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	<0.0002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	<0.0002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	<0.0002	----	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		----	<0.001	----	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	<0.0005	----	<0.0005	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	<0.0002	----	<0.0002	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	**85.1**	----	**87.2**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	**107**	----	**110**	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	**106**	----	**108**	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	**96.1**	----	**86.0**	----
Toluene-D8	2037-26-5	0.5	%		----	**98.2**	----	**92.6**	----
4-Bromofluorobenzene	460-00-4	0.5	%		----	**105**	----	**96.7**	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**82.3**	**78.4**	**82.8**	**90.7**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**80.4**	**76.9**	**81.0**	**85.1**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**76.0**	**77.4**	**79.0**	**66.9**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**89.0**	**85.2**	**89.2**	**92.4**	----
Anthracene-d10	1719-06-8	0.5	%		**91.3**	**87.2**	**92.4**	**109**	----
4-Terphenyl-d14	1718-51-0	0.5	%		**89.0**	**85.5**	**89.1**	**103**	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		----	**127**	----	**122**	----
Phenol-d6	13127-88-3	0.5	%		----	**94.5**	----	**92.3**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP02-C-0.5	HB-TP02-C-1	HB-TP02-C-2	HB-TP03-C-0.1	HB-TP03-C-0.5
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-017	EM2202101-018	EM2202101-019	EM2202101-022	EM2202101-023
					Result	Result	Result	Result	Result
EP075S: Acid Extractable Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		----	90.0	----	90.5	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	95.1	----	105	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		----	93.5	----	88.4	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		----	80.6	----	80.6	----
2-Fluorobiphenyl	321-60-8	0.5	%		----	89.4	----	91.9	----
Anthracene-d10	1719-06-8	0.5	%		----	92.4	----	109	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	97.8	----	108	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		85.4	----	81.9	----	----
Toluene-D8	2037-26-5	0.2	%		81.4	----	74.9	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		92.2	----	85.0	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	106	----	102	----
13C8-PFOA	----	0.0002	%		----	98.9	----	99.9	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	----	6.4	----	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	6.3	----	----	----
pH (Fox)	----	0.1	pH Unit	----	4.0	----	----	----
Reaction Rate	----	1	Reaction Unit	----	2	----	----	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	36	----	----
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	----	5.9	----	----	----
pH OX (23B)	----	0.1	pH Unit	----	5.6	----	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	----	<2	----	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	----	6	----	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	----	6	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	----	<0.020	----	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	----	<0.020	----	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	----	<0.020	----	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	----	<0.020	----	----	----
Peroxide Sulfur (23De)	----	0.020	% S	----	<0.020	----	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	----	<0.020	----	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	----	<10	----	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	----	<0.020	----	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	----	<0.020	----	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	----	<0.020	----	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	----	<0.020	----	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	----	<0.020	----	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	----	<0.020	----	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	----	<0.020	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EA029-E: Magnesium Values - Continued								
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	----	<0.020	----	----	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	----	**1.5**	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	----	<0.02	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	----	<10	----	----	----
Liming Rate	----	1	kg CaCO3/t	----	<1	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	----	<0.02	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	----	<10	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	----	<1	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**10.5**	----	**15.9**	**6.8**	**5.3**
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	----	----	**27800**	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	**No**	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	----	----	**No**	----
Asbestos Type	1332-21-4	-	--	----	----	----	**-**	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	**No**	----
Organic Fibre	----	0.1	g/kg	----	----	----	**Yes**	----
Sample weight (dry)	----	0.01	g	----	----	----	**52.1**	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	**U.DALKIN**	----
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	----	----	**40**	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	----	----	**30**	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	<5	<5	----
Barium	7440-39-3	10	mg/kg	<10	----	<10	<10	----
Beryllium	7440-41-7	1	mg/kg	<1	----	<1	<1	----
Boron	7440-42-8	50	mg/kg	<50	----	<50	<50	----
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	<1	----
Chromium	7440-47-3	2	mg/kg	**10**	----	**5**	**6**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Cobalt	7440-48-4	2	mg/kg	<2	----	<2	<2	----
Copper	7440-50-8	5	mg/kg	<5	----	9	7	----
Lead	7439-92-1	5	mg/kg	<5	----	<5	7	----
Manganese	7439-96-5	5	mg/kg	15	----	7	57	----
Nickel	7440-02-0	2	mg/kg	3	----	4	10	----
Selenium	7782-49-2	5	mg/kg	<5	----	<5	<5	----
Vanadium	7440-62-2	5	mg/kg	12	----	<5	6	----
Zinc	7440-66-6	5	mg/kg	<5	----	<5	11	----
Titanium	7440-32-6	10	mg/kg	80	----	40	200	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	<0.1	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	----	----	<1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	----	----	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	----	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	----	<0.5
Styrene	100-42-5	0.5	mg/kg	----	----	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	----	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	----	----	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	----	----	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	----	----	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	----	----	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	----	----	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	----	----	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	----	----	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	----	----	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	----	----	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	----	----	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	----	----	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	----	----	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	----	----	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	----	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	----	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
					Result	Result	Result	Result	Result
EP074D: Fumigants - Continued									
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		----	----	----	----	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		----	----	----	----	<0.5
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		----	----	----	----	<5
Chloromethane	74-87-3	5	mg/kg		----	----	----	----	<5
Vinyl chloride	75-01-4	5	mg/kg		----	----	----	----	<5
Bromomethane	74-83-9	5	mg/kg		----	----	----	----	<5
Chloroethane	75-00-3	5	mg/kg		----	----	----	----	<5
Trichlorofluoromethane	75-69-4	5	mg/kg		----	----	----	----	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg		----	----	----	----	<0.5
Iodomethane	74-88-4	0.5	mg/kg		----	----	----	----	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		----	----	----	----	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg		----	----	----	----	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		----	----	----	----	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		----	----	----	----	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		----	----	----	----	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg		----	----	----	----	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg		----	----	----	----	<0.5
Trichloroethene	79-01-6	0.5	mg/kg		----	----	----	----	<0.5
Dibromomethane	74-95-3	0.5	mg/kg		----	----	----	----	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		----	----	----	----	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg		----	----	----	----	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg		----	----	----	----	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		----	----	----	----	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		----	----	----	----	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		----	----	----	----	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		----	----	----	----	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		----	----	----	----	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg		----	----	----	----	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		----	----	----	----	<0.5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		----	----	----	----	<0.5
Bromobenzene	108-86-1	0.5	mg/kg		----	----	----	----	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg		----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	----	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	----	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	----	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	----	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	----	<0.5
Bromoform	75-25-2	0.5	mg/kg	----	----	----	----	<0.5
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.2**	**1.2**	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	----	----	----	<0.5
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	<0.5
Pentachlorophenol	87-86-5	1	mg/kg	----	----	----	----	<1
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	----	----	----	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	----	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	<0.5
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	----	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	----	----	----	----	<1
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	----	----	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	<0.5
3-Methylcholanthrene	56-49-5	0.5	mg/kg	----	----	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	<0.5
^ Sum of PAHs	----	0.5	mg/kg	----	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	**1.2**
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	----	----	----	----	<0.5
Diethyl phthalate	84-66-2	0.5	mg/kg	----	----	----	----	<0.5
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	----	----	----	----	<0.5
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	----	----	----	----	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	----	----	----	----	<5.0
Di-n-octylphthalate	117-84-0	0.5	mg/kg	----	----	----	----	<0.5
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	----	----	----	----	<0.5
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	----	----	----	----	<0.5
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	----	----	----	----	<1.0
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	----	----	----	----	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	----	----	----	----	<0.5
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	----	----	----	----	<0.5
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	----	----	----	----	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	----	----	----	----	<1.0
Methapyrilene	91-80-5	0.5	mg/kg	----	----	----	----	<0.5
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	----	----	----	----	<0.5
Acetophenone	98-86-2	0.5	mg/kg	----	----	----	----	<0.5
Nitrobenzene	98-95-3	0.5	mg/kg	----	----	----	----	<0.5
Isophorone	78-59-1	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued								
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	----	----	----	----	<1.0
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	----	----	----	----	<1.0
1-Naphthylamine	134-32-7	0.5	mg/kg	----	----	----	----	<0.5
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	----	----	----	----	<0.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	----	----	----	----	<0.5
Azobenzene	103-33-3	1	mg/kg	----	----	----	----	<1
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	----	----	----	----	<0.5
Phenacetin	62-44-2	0.5	mg/kg	----	----	----	----	<0.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg	----	----	----	----	<0.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	----	----	----	----	<0.5
Pronamide	23950-58-5	0.5	mg/kg	----	----	----	----	<0.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	----	----	----	----	<0.5
Chlorobenzilate	510-15-6	0.5	mg/kg	----	----	----	----	<0.5
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	----	----	----	----	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	----	----	----	----	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	----	----	----	----	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	----	----	----	----	<0.5
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	----	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	----	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	----	<0.5
Hexachloroethane	67-72-1	0.5	mg/kg	----	----	----	----	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	----	<0.5
Hexachloropropylene	1888-71-7	0.5	mg/kg	----	----	----	----	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	----	----	<0.5
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	----	----	----	----	<2.5
Pentachlorobenzene	608-93-5	0.5	mg/kg	----	----	----	----	<0.5
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	----	----	----	----	<1.0
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	----	----	----	----	<0.5
4-Chloroaniline	106-47-8	0.5	mg/kg	----	----	----	----	<0.5
2-Nitroaniline	88-74-4	1.0	mg/kg	----	----	----	----	<1.0
3-Nitroaniline	99-09-2	1.0	mg/kg	----	----	----	----	<1.0

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP075H: Anilines and Benzidines - Continued								
Dibenzofuran	132-64-9	0.5	mg/kg	----	----	----	----	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg	----	----	----	----	<0.5
Carbazole	86-74-8	0.5	mg/kg	----	----	----	----	<0.5
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	----	----	----	<0.5
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	----	----	----	<0.5
beta-BHC	319-85-7	0.5	mg/kg	----	----	----	----	<0.5
gamma-BHC	58-89-9	0.5	mg/kg	----	----	----	----	<0.5
delta-BHC	319-86-8	0.5	mg/kg	----	----	----	----	<0.5
Heptachlor	76-44-8	0.5	mg/kg	----	----	----	----	<0.5
Aldrin	309-00-2	0.5	mg/kg	----	----	----	----	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	----	----	----	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	----	----	----	<0.5
4.4`-DDE	72-55-9	0.5	mg/kg	----	----	----	----	<0.5
Dieldrin	60-57-1	0.5	mg/kg	----	----	----	----	<0.5
Endrin	72-20-8	0.5	mg/kg	----	----	----	----	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	----	----	----	<0.5
4.4`-DDD	72-54-8	0.5	mg/kg	----	----	----	----	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	----	----	----	<0.5
4.4`-DDT	50-29-3	1.0	mg/kg	----	----	----	----	<1.0
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	----	----	----	<0.5
Dimethoate	60-51-5	0.5	mg/kg	----	----	----	----	<0.5
Diazinon	333-41-5	0.5	mg/kg	----	----	----	----	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	----	----	----	<0.5
Malathion	121-75-5	0.5	mg/kg	----	----	----	----	<0.5
Fenthion	55-38-9	0.5	mg/kg	----	----	----	----	<0.5
Chlorpyrifos	2921-88-2	0.5	mg/kg	----	----	----	----	<0.5
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	----	----	----	----	<0.5
Chlorfenvinphos	470-90-6	0.5	mg/kg	----	----	----	----	<0.5
Prothiofos	34643-46-4	0.5	mg/kg	----	----	----	----	<0.5
Ethion	563-12-2	0.5	mg/kg	----	----	----	----	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	----	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	<100	<100	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	<10	<10	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	<100	<100	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	<50	<50	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	<50	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	<0.2	<0.2	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg		<1	----	<1	<1	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	----	----	----	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	----	----	<0.0002
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	**92.8**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	----	**108**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	----	----	**106**
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	----	----	----	**100**
Toluene-D8	2037-26-5	0.5	%		----	----	----	----	**108**
4-Bromofluorobenzene	460-00-4	0.5	%		----	----	----	----	**111**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**92.5**	----	**96.4**	**91.8**	**93.2**
2-Chlorophenol-D4	93951-73-6	0.5	%		**89.4**	----	**92.2**	**86.8**	**88.6**
2.4.6-Tribromophenol	118-79-6	0.5	%		**86.2**	----	**85.9**	**84.2**	**86.1**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**99.8**	----	**101**	**100**	**101**
Anthracene-d10	1719-06-8	0.5	%		**100**	----	**102**	**101**	**99.2**
4-Terphenyl-d14	1718-51-0	0.5	%		**103**	----	**104**	**102**	**100**
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		----	----	----	----	**108**
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	**92.9**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP03-C-1	HB-TP03-C-2	HB-TP03-C-3	HB-TP04-C-0.1	HB-TP04-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-024	EM2202101-025	EM2202101-026	EM2202101-027	EM2202101-028
					Result	Result	Result	Result	Result
EP075S: Acid Extractable Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	89.9
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	102
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		----	----	----	----	88.4
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		----	----	----	----	80.1
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	88.7
Anthracene-d10	1719-06-8	0.5	%		----	----	----	----	107
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	----	----	107
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		84.7	----	93.7	90.6	----
Toluene-D8	2037-26-5	0.2	%		78.5	----	88.8	88.3	----
4-Bromofluorobenzene	460-00-4	0.2	%		88.1	----	101	99.5	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	----	----	113
13C8-PFOA	----	0.0002	%		----	----	----	----	107

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	----	5.1	----	8.1
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	33	----	180
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	5.6	----	8.8	----	16.3
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	----	----	30300	----	5560
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	No	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	No	----	No	----
Asbestos Type	1332-21-4	-	--	----	-	----	-	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	No	----
Organic Fibre	----	0.1	g/kg	----	Yes	----	Yes	----
Sample weight (dry)	----	0.01	g	----	39.1	----	536	----
APPROVED IDENTIFIER:	----	-	--	----	U.DALKIN	----	U.DALKIN	----
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	----	----	50	----	80
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	----	----	10	----	<10
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	----	<5
Barium	7440-39-3	10	mg/kg	----	----	<10	----	60
Beryllium	7440-41-7	1	mg/kg	----	----	<1	----	<1
Boron	7440-42-8	50	mg/kg	----	----	<50	----	<50
Cadmium	7440-43-9	1	mg/kg	----	----	<1	----	<1
Chromium	7440-47-3	2	mg/kg	----	----	6	----	20
Cobalt	7440-48-4	2	mg/kg	----	----	<2	----	5
Copper	7440-50-8	5	mg/kg	----	----	14	----	23
Lead	7439-92-1	5	mg/kg	----	----	<5	----	173
Manganese	7439-96-5	5	mg/kg	----	----	5	----	185
Nickel	7440-02-0	2	mg/kg	----	----	10	----	26
Selenium	7782-49-2	5	mg/kg	----	----	<5	----	<5
Vanadium	7440-62-2	5	mg/kg	----	----	7	----	9
Zinc	7440-66-6	5	mg/kg	----	----	9	----	230

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Titanium	7440-32-6	10	mg/kg	----	----	**50**	----	**680**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	**1.0**
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-2	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	----	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	----	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	<0.5	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	<0.5	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	----	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	----	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	----	<0.5	----	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	----	<0.5	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		----	----	<0.5	----	<0.5
Pyrene	129-00-0	0.5	mg/kg		----	----	<0.5	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	----	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg		----	----	<0.5	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	<0.5	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	----	<0.5	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	----	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	**0.6**	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	**1.2**	----	**1.2**
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds - Continued								
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg	<1	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	----	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	----	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	----	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	----	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	----	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	----	----	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	----	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	----	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg	<0.5	----	----	----	----
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	<0.5	----	----	----	----
Acetophenone	98-86-2	0.5	mg/kg	<0.5	----	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	----	----	----	----
Isophorone	78-59-1	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	----	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	----	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	----	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	----	----	----	----
Azobenzene	103-33-3	1	mg/kg	<1	----	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	----	----	----	----
Phenacetin	62-44-2	0.5	mg/kg	<0.5	----	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
					Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued									
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		<0.5	----	----	----	----
Pronamide	23950-58-5	0.5	mg/kg		<0.5	----	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	----	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		<0.5	----	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		<0.5	----	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		<0.5	----	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		<0.5	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		<0.5	----	----	----	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	----	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg		<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	----	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		<2.5	----	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		<1.0	----	----	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		<0.5	----	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg		<0.5	----	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg		<1.0	----	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg		<1.0	----	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg		<0.5	----	----	----	----
Carbazole	86-74-8	0.5	mg/kg		<0.5	----	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg		<0.5	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	mg/kg		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
Heptachlor	76-44-8	0.5	mg/kg	<0.5	----	----	----	----
Aldrin	309-00-2	0.5	mg/kg	<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	<0.5	----	----	----	----
Endrin	72-20-8	0.5	mg/kg	<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	<1.0	----	----	----	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	<0.5	----	----	----	----
Dimethoate	60-51-5	0.5	mg/kg	<0.5	----	----	----	----
Diazinon	333-41-5	0.5	mg/kg	<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	----	----	----	----
Malathion	121-75-5	0.5	mg/kg	<0.5	----	----	----	----
Fenthion	55-38-9	0.5	mg/kg	<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg	<0.5	----	----	----	----
Ethion	563-12-2	0.5	mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	<10	----	<10
C10 - C14 Fraction	----	50	mg/kg	----	----	<50	----	<50
C15 - C28 Fraction	----	100	mg/kg	----	----	<100	----	<100
C29 - C36 Fraction	----	100	mg/kg	----	----	<100	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	<50	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	<10	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	<10	----	<10
>C10 - C16 Fraction	----	50	mg/kg	----	----	<50	----	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C16 - C34 Fraction	----	100	mg/kg		----	----	<100	----	<100
>C34 - C40 Fraction	----	100	mg/kg		----	----	<100	----	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		----	----	<50	----	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		----	----	<50	----	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	<0.2	----	<0.2
Toluene	108-88-3	0.5	mg/kg		----	----	<0.5	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	<0.5	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	<0.5	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	<0.5	----	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		----	----	<0.2	----	<0.2
^ **Total Xylenes**	----	0.5	mg/kg		----	----	<0.5	----	<0.5
Naphthalene	91-20-3	1	mg/kg		----	----	<1	----	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**82.3**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**103**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**96.9**	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**99.2**	----	----	----	----
Toluene-D8	2037-26-5	0.5	%		**106**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**108**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**94.3**	----	**93.8**	----	**81.5**
2-Chlorophenol-D4	93951-73-6	0.5	%		**88.8**	----	**90.8**	----	**79.5**
2.4.6-Tribromophenol	118-79-6	0.5	%		**88.8**	----	**85.7**	----	**76.2**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**98.2**	----	**100**	----	**88.4**
Anthracene-d10	1719-06-8	0.5	%		**93.8**	----	**100**	----	**91.6**
4-Terphenyl-d14	1718-51-0	0.5	%		**92.6**	----	**100**	----	**87.4**
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		**98.2**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC02_310122	HB-TP04-C-1	HB-TP04-C-3	HB-TP05-C-0.1	HB-TP05-C-0.5
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-029	EM2202101-030	EM2202101-031	EM2202101-032	EM2202101-033
					Result	Result	Result	Result	Result
EP075S: Acid Extractable Surrogates - Continued									
Phenol-d6	13127-88-3	0.5	%		**91.2**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**87.8**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**87.6**	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		**84.4**	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		**76.2**	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		**83.3**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**104**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**95.4**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	**79.6**	----	**76.8**
Toluene-D8	2037-26-5	0.2	%		----	----	**76.9**	----	**70.3**
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	**89.7**	----	**80.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	----	----	9.0	7.8
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	----	5.6	----	----
pH (Fox)	----	0.1	pH Unit	----	----	3.0	----	----
Reaction Rate	----	1	Reaction Unit	----	----	2	----	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	----	87	101
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	----	----	5.7	----	----
pH OX (23B)	----	0.1	pH Unit	----	----	4.5	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	----	----	<2	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	----	----	<2	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	----	----	<2	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	----	----	<0.020	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	----	----	<0.020	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	----	----	<0.020	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	----	----	<0.020	----	----
Peroxide Sulfur (23De)	----	0.020	% S	----	----	<0.020	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	----	----	<0.020	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	----	----	<10	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	----	----	0.041	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	----	----	0.041	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	----	----	<0.020	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	----	----	<10	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	----	----	<0.020	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	----	----	<0.020	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	----	----	<0.020	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	----	----	<0.020	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EA029-E: Magnesium Values - Continued								
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	----	----	<10	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	----	----	<0.020	----	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	----	----	1.5	----	----
Net Acidity (sulfur units)	----	0.02	% S	----	----	<0.02	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	----	----	<10	----	----
Liming Rate	----	1	kg CaCO3/t	----	----	<1	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	----	----	<0.02	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	----	----	<10	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	----	----	<1	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	20.0	19.2	----	12.9	9.0
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	----	----	----	11500	9900
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	----	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	----	No
Asbestos Type	1332-21-4	-	--	-	-	-	----	-
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	----	No
Organic Fibre	----	0.1	g/kg	Yes	Yes	Yes	----	Yes
Sample weight (dry)	----	0.01	g	427	414	521	----	400
APPROVED IDENTIFIER:	----	-	--	U.DALKIN	U.DALKIN	U.DALKIN	----	U.DALKIN
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	----	----	----	20	140
Sulfur as S	63705-05-5	10	mg/kg	----	----	----	<10	----
Silica	7631-86-9	1	mg/kg	----	----	----	57	----
Silicon	7440-21-3	1	mg/kg	----	----	----	27	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	----	----	----	<10	30
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	<5	8
Barium	7440-39-3	10	mg/kg	----	----	----	10	200
Beryllium	7440-41-7	1	mg/kg	----	----	----	<1	<1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Boron	7440-42-8	50	mg/kg	----	----	----	<50	<50
Cadmium	7440-43-9	1	mg/kg	----	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg	----	----	----	**6**	**16**
Cobalt	7440-48-4	2	mg/kg	----	----	----	<2	**19**
Copper	7440-50-8	5	mg/kg	----	----	----	<5	**23**
Lead	7439-92-1	5	mg/kg	----	----	----	**15**	**8**
Manganese	7439-96-5	5	mg/kg	----	----	----	**54**	**1640**
Nickel	7440-02-0	2	mg/kg	----	----	----	**3**	**39**
Selenium	7782-49-2	5	mg/kg	----	----	----	<5	<5
Vanadium	7440-62-2	5	mg/kg	----	----	----	**6**	**13**
Zinc	7440-66-6	5	mg/kg	----	----	----	**20**	**31**
Titanium	7440-32-6	10	mg/kg	----	----	----	**190**	**310**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	**0.3**	<0.1
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg		<0.5	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		<0.5	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		<0.5	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		<0.5	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		<0.5	<0.5	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		<5	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		<5	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		<5	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		<5	<5	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		<0.5	<0.5	----	----	----
EP074D: Fumigants									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	**1.2**	**1.2**
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	**1.3**	<0.5	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	<5.0	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	----	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	<1.0	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	<1.0	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	----	----	----
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
					Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued									
Acetophenone	98-86-2	0.5	mg/kg		<0.5	<0.5	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Isophorone	78-59-1	0.5	mg/kg		<0.5	<0.5	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg		<1.0	<1.0	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg		<1.0	<1.0	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg		<0.5	<0.5	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		<0.5	<0.5	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Azobenzene	103-33-3	1	mg/kg		<1	<1	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg		<0.5	<0.5	----	----	----
Phenacetin	62-44-2	0.5	mg/kg		<0.5	<0.5	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg		<0.5	<0.5	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Pronamide	23950-58-5	0.5	mg/kg		<0.5	<0.5	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		<0.5	<0.5	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		<0.5	<0.5	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		<0.5	<0.5	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		<0.5	<0.5	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		<0.5	<0.5	----	----	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	<0.5	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg		<0.5	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	<0.5	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		<2.5	<2.5	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		<0.5	<0.5	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		<1.0	<1.0	----	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EP075H: Anilines and Benzidines - Continued								
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	<1.0	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	<1.0	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	----	----	----
beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	----	----	----
delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	----	----	----
Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	<1.0	<1.0	----	----	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
				Result	Result	Result	Result	Result
EP075J: Organophosphorus Pesticides - Continued								
Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	----	----	----	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg	----	----	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	**120**
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	----	----	----	<50	**120**
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg	----	----	----	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg	----	----	----	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg	----	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	----	----	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**84.1**	**88.6**	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**106**	**113**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**109**	**117**	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**95.4**	**86.9**	----	----	----
Toluene-D8	2037-26-5	0.5	%		**100**	**92.0**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**100**	**94.2**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**80.0**	**83.6**	----	**74.4**	**92.8**
2-Chlorophenol-D4	93951-73-6	0.5	%		**77.9**	**81.7**	----	**75.0**	**89.2**
2.4.6-Tribromophenol	118-79-6	0.5	%		**74.5**	**81.5**	----	**70.9**	**84.4**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**89.4**	**92.2**	----	**84.8**	**99.4**
Anthracene-d10	1719-06-8	0.5	%		**92.4**	**96.4**	----	**88.6**	**99.3**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP05-C-1	HB-TP06-C-0.1	HB-TP06-C-0.5	HB-TP06-C-1	HB-TP07-C-0.1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00	28-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-034	EM2202101-035	EM2202101-036	EM2202101-037	EM2202101-040
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		81.9	79.5	----	75.9	94.1
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		116	116	----	----	----
Phenol-d6	13127-88-3	0.5	%		81.0	99.9	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		83.1	93.7	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		86.3	96.2	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		83.6	95.2	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		77.5	75.6	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		84.8	94.0	----	----	----
Anthracene-d10	1719-06-8	0.5	%		86.1	96.5	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		91.7	99.9	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	84.1	110
Toluene-D8	2037-26-5	0.2	%		----	----	----	79.4	103
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	----	86.6	117
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		116	112	----	----	----
13C8-PFOA	----	0.0002	%		116	103	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	8.2	----	----	14.4	48.9
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	No	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	No	No	----	----
Asbestos Type	1332-21-4	-	--	----	-	-	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	No	----	----
Organic Fibre	----	0.1	g/kg	----	Yes	Yes	----	----
Sample weight (dry)	----	0.01	g	----	523	30.4	----	----
APPROVED IDENTIFIER:	----	-	--	----	U.DALKIN	U.DALKIN	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	<5	----
Barium	7440-39-3	10	mg/kg	----	----	----	10	----
Beryllium	7440-41-7	1	mg/kg	----	----	----	<1	----
Boron	7440-42-8	50	mg/kg	----	----	----	<50	----
Cadmium	7440-43-9	1	mg/kg	----	----	----	<1	----
Chromium	7440-47-3	2	mg/kg	----	----	----	11	----
Cobalt	7440-48-4	2	mg/kg	----	----	----	<2	----
Copper	7440-50-8	5	mg/kg	----	----	----	38	----
Lead	7439-92-1	5	mg/kg	----	----	----	<5	----
Manganese	7439-96-5	5	mg/kg	----	----	----	7	----
Nickel	7440-02-0	2	mg/kg	----	----	----	4	----
Selenium	7782-49-2	5	mg/kg	----	----	----	<5	----
Vanadium	7440-62-2	5	mg/kg	----	----	----	10	----
Zinc	7440-66-6	5	mg/kg	----	----	----	8	----
Titanium	7440-32-6	10	mg/kg	----	----	----	30	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	<0.1	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	----	----	----	<1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	----	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		<0.05	----	----	----	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Styrene	100-42-5	0.5	mg/kg		<0.5	----	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	----	----	----	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg		<0.5	----	----	----	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	----	----	----	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	----	----	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	----	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	----	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	----	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	----	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	----	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	----	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	----	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	----	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	----	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	----	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	----	<5
Chloromethane	74-87-3	5	mg/kg	<5	----	----	----	<5
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	----	<5
Bromomethane	74-83-9	5	mg/kg	<5	----	----	----	<5
Chloroethane	75-00-3	5	mg/kg	<5	----	----	----	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	----	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	----	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	----	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	----	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	----	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	----	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	----	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	----	----	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	----	----	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	----	----	----	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	----	----	----	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	----	----	----	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	----	----	----	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	----	----	----	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	----	----	----	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	----	----	----	<0.5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	----	----	----	<0.5
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	----	----	----	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	----	----	----	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	----	----	----	<0.5
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	----	----	----	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	----	----	----	<0.5
Bromoform	75-25-2	0.5	mg/kg		<0.5	----	----	----	<0.5
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	**1.2**	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	----	----	----	<0.5
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds - Continued								
Pentachlorophenol	87-86-5	1	mg/kg	<1	----	----	----	<1
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	----	----	----	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	<0.5
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	<0.5
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	----	----	----	<1
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	----	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	<0.5
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	<0.5
^ Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	----	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	----	----	**1.2**
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	----	----	----	<0.5
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	----	----	----	<0.5
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	----	----	----	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	----	----	----	<5.0
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	----	----	----	<0.5
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	----	----	----	<0.5
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	----	----	----	<1.0
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	----	----	----	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	----	----	----	<0.5
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	----	----	----	<0.5
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	----	----	----	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	----	----	----	<1.0
Methapyrilene	91-80-5	0.5	mg/kg	<0.5	----	----	----	<0.5
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Acetophenone	98-86-2	0.5	mg/kg	<0.5	----	----	----	<0.5
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Isophorone	78-59-1	0.5	mg/kg	<0.5	----	----	----	<0.5
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	----	----	----	<1.0
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	----	----	----	<1.0
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	----	----	----	<0.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Azobenzene	103-33-3	1	mg/kg	<1	----	----	----	<1
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	----	----	----	<0.5
Phenacetin	62-44-2	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	----	----	----	<0.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Pronamide	23950-58-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	----	----	----	<0.5
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	----	----	----	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	----	----	----	<0.5
EP075G: Chlorinated Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP075G: Chlorinated Hydrocarbons - Continued								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	----	----	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	----	----	<0.5
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	----	----	<0.5
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	----	----	----	<2.5
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	----	----	----	<1.0
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	----	----	----	<0.5
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	----	----	----	<1.0
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	----	----	----	<1.0
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	----	----	----	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	----	----	----	<0.5
Carbazole	86-74-8	0.5	mg/kg	<0.5	----	----	----	<0.5
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	----	----	----	<0.5
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	----	----	----	<0.5
beta-BHC	319-85-7	0.5	mg/kg	<0.5	----	----	----	<0.5
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	----	----	----	<0.5
delta-BHC	319-86-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Heptachlor	76-44-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Aldrin	309-00-2	0.5	mg/kg	<0.5	----	----	----	<0.5
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	----	----	----	<0.5
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	----	----	----	<0.5
4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	----	----	----	<0.5
Dieldrin	60-57-1	0.5	mg/kg	<0.5	----	----	----	<0.5
Endrin	72-20-8	0.5	mg/kg	<0.5	----	----	----	<0.5
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	----	----	----	<0.5
4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	----	----	----	<0.5
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
4.4`-DDT	50-29-3	1.0	mg/kg	<1.0	----	----	----	<1.0
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Dimethoate	60-51-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Diazinon	333-41-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	----	----	----	<0.5
Malathion	121-75-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Fenthion	55-38-9	0.5	mg/kg	<0.5	----	----	----	<0.5
Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	----	----	----	<0.5
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	----	----	----	<0.5
Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	----	----	----	<0.5
Prothiofos	34643-46-4	0.5	mg/kg	<0.5	----	----	----	<0.5
Ethion	563-12-2	0.5	mg/kg	<0.5	----	----	----	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	----	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	----	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	----	----	----	<1	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**91.8**	----	----	----	**85.8**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**108**	----	----	----	**106**
EP068T: Organophosphorus Pesticide Surrogate									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP07-C-0.5	HB-TP07-C-1	HB-TP08-C-0.1	HB-TP08-C-0.5	HB-TP08-C-1
				Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202101-041	EM2202101-042	EM2202101-045	EM2202101-046	EM2202101-047
					Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate - Continued									
DEF	78-48-8	0.05	%		104	----	----	----	96.9
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		104	----	----	----	89.2
Toluene-D8	2037-26-5	0.5	%		108	----	----	----	95.9
4-Bromofluorobenzene	460-00-4	0.5	%		112	----	----	----	103
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		91.7	----	----	93.0	92.5
2-Chlorophenol-D4	93951-73-6	0.5	%		89.9	----	----	91.6	91.4
2.4.6-Tribromophenol	118-79-6	0.5	%		88.8	----	----	86.0	83.4
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		102	----	----	102	99.7
Anthracene-d10	1719-06-8	0.5	%		102	----	----	102	100
4-Terphenyl-d14	1718-51-0	0.5	%		97.9	----	----	102	101
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		107	----	----	----	101
Phenol-d6	13127-88-3	0.5	%		94.3	----	----	----	89.9
2-Chlorophenol-D4	93951-73-6	0.5	%		90.4	----	----	----	91.3
2.4.6-Tribromophenol	118-79-6	0.5	%		92.7	----	----	----	96.1
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		90.6	----	----	----	88.1
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		83.6	----	----	----	83.0
2-Fluorobiphenyl	321-60-8	0.5	%		87.0	----	----	----	88.6
Anthracene-d10	1719-06-8	0.5	%		102	----	----	----	111
4-Terphenyl-d14	1718-51-0	0.5	%		96.9	----	----	----	100
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	87.3	----
Toluene-D8	2037-26-5	0.2	%		----	----	----	80.4	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	----	92.9	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		105	----	----	----	125
13C8-PFOA	----	0.0002	%		97.7	----	----	----	99.8

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	**5.2**	----	----	**5.5**	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	**39**	----	----	**11**	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**28.6**	----	----	----	----
Moisture Content	----	1.0	%	----	**12.9**	----	**14.6**	----
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	**25600**	----	----	**90900**	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	**No**	**No**	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	**No**	**No**	----	----
Asbestos Type	1332-21-4	-	--	----	**-**	**-**	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	**No**	**No**	----	----
Organic Fibre	----	0.1	g/kg	----	**No**	**No**	----	----
Sample weight (dry)	----	0.01	g	----	**67.3**	**35.7**	----	----
APPROVED IDENTIFIER:	----	-	--	----	**U.DALKIN**	**U.DALKIN**	----	----
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	**50**	----	----	<10	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	**30**	----	----	<10	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	<5	----
Barium	7440-39-3	10	mg/kg	----	----	----	<10	----
Beryllium	7440-41-7	1	mg/kg	----	----	----	<1	----
Boron	7440-42-8	50	mg/kg	----	----	----	<50	----
Cadmium	7440-43-9	1	mg/kg	----	----	----	<1	----
Chromium	7440-47-3	2	mg/kg	----	----	----	**5**	----
Cobalt	7440-48-4	2	mg/kg	----	----	----	<2	----
Copper	7440-50-8	5	mg/kg	----	----	----	<5	----
Lead	7439-92-1	5	mg/kg	----	----	----	<5	----
Manganese	7439-96-5	5	mg/kg	----	----	----	<5	----
Nickel	7440-02-0	2	mg/kg	----	----	----	<2	----
Selenium	7782-49-2	5	mg/kg	----	----	----	<5	----
Vanadium	7440-62-2	5	mg/kg	----	----	----	**8**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Zinc	7440-66-6	5	mg/kg	----	----	----	<5	----
Titanium	7440-32-6	10	mg/kg	----	----	----	**20**	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	<0.1	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	<1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	----	<0.05	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg	----	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	----	<0.5	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	----	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	<5	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	<0.5	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg	----	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	<5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit		EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
					Result	Result	Result	Result	----
EP074E: Halogenated Aliphatic Compounds - Continued									
Bromomethane	74-83-9	5	mg/kg		----	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg		----	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		----	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg		----	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg		----	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		----	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		----	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		----	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		----	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		----	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		----	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		----	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		----	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		----	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		----	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		----	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		----	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		----	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		----	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		----	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		----	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		----	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		----	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		----	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		----	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		----	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		----	<0.5	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		----	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		----	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP074G: Trihalomethanes - Continued								
Bromoform	75-25-2	0.5	mg/kg	----	<0.5	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	0.6	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	1.2	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	<0.5	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg	----	<1	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	<0.5	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	----	<1	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	----	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	----	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit		EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
					Result	Result	Result	Result	----
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	----	----	
^ Sum of PAHs	----	0.5	mg/kg	----	<0.5	----	----	----	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	----	----	----	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	----	----	----	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	----	----	----	
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg	----	<0.5	----	----	----	
Diethyl phthalate	84-66-2	0.5	mg/kg	----	<0.5	----	----	----	
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	----	<0.5	----	----	----	
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	----	<0.5	----	----	----	
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	----	<5.0	----	----	----	
Di-n-octylphthalate	117-84-0	0.5	mg/kg	----	<0.5	----	----	----	
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	----	<0.5	----	----	----	
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	----	<0.5	----	----	----	
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	----	<1.0	----	----	----	
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	----	<0.5	----	----	----	
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	----	<0.5	----	----	----	
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	----	<0.5	----	----	----	
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	----	<0.5	----	----	----	
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	----	<1.0	----	----	----	
Methapyrilene	91-80-5	0.5	mg/kg	----	<0.5	----	----	----	
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg	----	<0.5	----	----	----	
Acetophenone	98-86-2	0.5	mg/kg	----	<0.5	----	----	----	
Nitrobenzene	98-95-3	0.5	mg/kg	----	<0.5	----	----	----	
Isophorone	78-59-1	0.5	mg/kg	----	<0.5	----	----	----	
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	----	<1.0	----	----	----	
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	----	<1.0	----	----	----	
1-Naphthylamine	134-32-7	0.5	mg/kg	----	<0.5	----	----	----	
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	----	<0.5	----	----	----	
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	----	<0.5	----	----	----	
Azobenzene	103-33-3	1	mg/kg	----	<1	----	----	----	

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP075E: Nitroaromatics and Ketones - Continued								
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	----	<0.5	----	----	----
Phenacetin	62-44-2	0.5	mg/kg	----	<0.5	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	----	<0.5	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	----	<0.5	----	----	----
Pronamide	23950-58-5	0.5	mg/kg	----	<0.5	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	----	<0.5	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg	----	<0.5	----	----	----
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	----	<0.5	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	----	<0.5	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	----	<0.5	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	----	<0.5	----	----	----
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	<0.5	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg	----	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	<0.5	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	----	<2.5	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	----	<1.0	----	----	----
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	----	<0.5	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg	----	<0.5	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	----	<1.0	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg	----	<1.0	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	----	<0.5	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	----	<0.5	----	----	----
Carbazole	86-74-8	0.5	mg/kg	----	<0.5	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	<0.5	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP075I: Organochlorine Pesticides - Continued								
beta-BHC	319-85-7	0.5	mg/kg	----	<0.5	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg	----	<0.5	----	----	----
delta-BHC	319-86-8	0.5	mg/kg	----	<0.5	----	----	----
Heptachlor	76-44-8	0.5	mg/kg	----	<0.5	----	----	----
Aldrin	309-00-2	0.5	mg/kg	----	<0.5	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	<0.5	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	----	<0.5	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	----	<0.5	----	----	----
Endrin	72-20-8	0.5	mg/kg	----	<0.5	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	----	<0.5	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	----	<1.0	----	----	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	<0.5	----	----	----
Dimethoate	60-51-5	0.5	mg/kg	----	<0.5	----	----	----
Diazinon	333-41-5	0.5	mg/kg	----	<0.5	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	<0.5	----	----	----
Malathion	121-75-5	0.5	mg/kg	----	<0.5	----	----	----
Fenthion	55-38-9	0.5	mg/kg	----	<0.5	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg	----	<0.5	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	----	<0.5	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg	----	<0.5	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg	----	<0.5	----	----	----
Ethion	563-12-2	0.5	mg/kg	----	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg	----	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	<100	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	----	----	----	<50	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg	----	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	----
^ **Sum of BTEX**	----	0.2	mg/kg	----	----	----	<0.2	----
^ **Total Xylenes**	----	0.5	mg/kg	----	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	----	----	----	<1	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	<0.0002	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	<0.0005	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
			Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
				Result	Result	Result	Result	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	<0.0005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	<0.0002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	<0.0002	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**96.0**	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**107**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**101**	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	**85.0**	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	**91.8**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	**99.4**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	**90.2**	----	**92.2**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**88.7**	----	**87.2**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**83.1**	----	**82.5**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	**99.2**	----	**97.4**	----
Anthracene-d10	1719-06-8	0.5	%	----	**101**	----	**102**	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	**104**	----	**103**	----
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.5	%	----	**112**	----	----	----
Phenol-d6	13127-88-3	0.5	%	----	**93.7**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**93.7**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**91.1**	----	----	----
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	0.5	%	----	**89.6**	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%	----	**80.7**	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%	----	**86.5**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-TP08-C-3	HB-TP09-C-0.1	QC003_310122	HB-TP09-C-1	----
				Sampling date / time	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	31-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit		EM2202101-049	EM2202101-050	EM2202101-051	EM2202101-053	--------
					Result	Result	Result	Result	----
EP075T: Base/Neutral Extractable Surrogates - Continued									
Anthracene-d10	1719-06-8	0.5	%		----	**105**	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	**98.3**	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	**87.4**	----
Toluene-D8	2037-26-5	0.2	%		----	----	----	**80.0**	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	----	**90.4**	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	**109**	----	----	----
13C8-PFOA	----	0.0002	%		----	**107**	----	----	----

Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)			Sample ID	HB-TP01-PACM	HB-TP02-C-PACM-0.9	HB-TP09-C-PACM	----	----
			Sampling date / time	28-Jan-2022 00:00	28-Jan-2022 00:00	31-Jan-2022 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2202101-015	EM2202101-021	EM2202101-054	--------	--------
				Result	Result	Result	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**No**	**Yes**	**----**	**----**
Asbestos Type	1332-21-4	-	--	**-**	**-**	**Ch + Am + Cr**	**----**	**----**
Asbestos (Trace)	1332-21-4	5	Fibres	**No**	**No**	**N/A**	**----**	**----**
Sample weight (dry)	----	0.01	g	**2.50**	**1.90**	**4.30**	**----**	**----**
Synthetic Mineral Fibre	----	0.1	g/kg	**Yes**	**Yes**	**No**	**----**	**----**
Organic Fibre	----	0.1	g/kg	**No**	**No**	**No**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--	**U.DALKIN**	**U.DALKIN**	**U.DALKIN**	**----**	**----**

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	HB-TP01-C-0.5 - 28-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-TP02-C-0.1 - 28-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-TP02-C-1 - 28-Jan-2022 00:00	Brown sandy soil with rock and organic matter.
EA200: Description	HB-TP05-C-0.1 - 28-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-TP05-C-1 - 28-Jan-2022 00:00	Brown soil with rock and organic matter.
EA200: Description	HB-TP06-C-0.1 - 28-Jan-2022 00:00	Brown soil with rock and organic matter.
EA200: Description	HB-TP06-C-0.5 - 28-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-TP07-C-0.1 - 28-Jan-2022 00:00	Brown soil with rock and organic matter.
EA200: Description	HB-TP07-C-1 - 28-Jan-2022 00:00	Brown sandy soil with rock and organic matter.
EA200: Description	HB-BH04-C-0.1 - 31-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-BH04-C-1 - 31-Jan-2022 00:00	Brown soil with rock matter.
EA200: Description	HB-BH05-C-0.1 - 31-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-BH05-C-1 - 31-Jan-2022 00:00	Brown soil with rock matter.
EA200: Description	HB-BH06-C-0.5 - 31-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-BH06-C-2 - 31-Jan-2022 00:00	Beige soil with rock matter.
EA200: Description	HB-TP03-C-0.1 - 31-Jan-2022 00:00	Brown soil with rock and organic matter.
EA200: Description	HB-TP03-C-0.5 - 31-Jan-2022 00:00	Brown soil with rock matter.
EA200: Description	HB-TP04-C-0.1 - 31-Jan-2022 00:00	Brown soil with rock and organic matter.
EA200: Description	HB-TP04-C-1 - 31-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-TP08-C-0.1 - 31-Jan-2022 00:00	Beige soil with rock and organic matter.
EA200: Description	HB-TP09-C-0.1 - 31-Jan-2022 00:00	Beige tan clay like soil with rock matter.
EA200: Description	QC003_310122 - 31-Jan-2022 00:00	Beige tan clay like soil.

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	HB-TP01-PACM - 28-Jan-2022 00:00	Grey fragment with synthetic mineral fibres approx 40 x 30 x 1mm.
EA200: Description	HB-TP02-C-PACM-0.9 - 28-Jan-2022 00:00	Brown fragment with synthetic mineral fibres approx 35 x 25 x 2mm.
EA200: Description	HB-TP09-C-PACM - 31-Jan-2022 00:00	Asbestos sheeting fragment approx 30 x 20 x 5mm.

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	36	140
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	62	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	40	139
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	54	134
Phenol-d6	13127-88-3	62	122
2-Chlorophenol-D4	93951-73-6	52	127
2.4.6-Tribromophenol	118-79-6	38	133
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	67	128
1.2-Dichlorobenzene-D4	2199-69-1	63	108
2-Fluorobiphenyl	321-60-8	70	127
Anthracene-d10	1719-06-8	58	138
4-Terphenyl-d14	1718-51-0	50	138
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124
EP231S: PFAS Surrogate			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry) 18958 (Biology).

(SOIL) EA003 :pH (field/fox)

(SOIL) EA029-D: Calcium Values

(SOIL) EA029-E: Magnesium Values

(SOIL) EA029-F: Excess Acid Neutralising Capacity

(SOIL) EA029-H: Acid Base Accounting

(SOIL) EA029-G: Retained Acidity

(SOIL) EA029-A: pH Measurements

(SOIL) EA029-C: Sulfur Trail

(SOIL) EA029-B: Acidity Trail

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA150: Soil Classification based on Particle Size

(SOIL) EA152: Soil Particle Density

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2202101**	Page	: 1 of 45
Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS360318	Date Samples Received	: 11-Feb-2022
Order number	: ----	Date Analysis Commenced	: 16-Feb-2022
C-O-C number	: ----	Issue Date	: 25-Feb-2022
Sampler	: AV		
Site	: ----		
Quote number	: ME/030/22		
No. of samples received	: 55		
No. of samples analysed	: 47		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Vincent Emerton-Bell	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Xing Lin	Senior Organic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4179558)									
EM2202101-001	HB-BH04-C-0.1	EG005T: Manganese	7439-96-5	5	mg/kg	46	56	19.2	0% - 50%
EM2202101-014	HB-TP01-C-1	EG005T: Titanium	7440-32-6	10	mg/kg	2220	2160	3.1	0% - 20%
EM2202101-001	HB-BH04-C-0.1	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	<10	20	0.0	No Limit
		EG005T: Titanium	7440-32-6	10	mg/kg	320	390	17.9	0% - 20%
		EG005T: Chromium	7440-47-3	2	mg/kg	11	12	11.6	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	4	6	24.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	9	9	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	12	24.3	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	8	10	15.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	16	44.5	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EM2202101-014	HB-TP01-C-1	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	<10	<10	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4179558) - continued									
EM2202101-014	HB-TP01-C-1	EG005T: Lead	7439-92-1	5	mg/kg	10	13	29.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4179560)									
EM2202101-053	HB-TP09-C-1	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	<10	<10	0.0	No Limit
		EG005T: Titanium	7440-32-6	10	mg/kg	20	20	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	5	5	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	8	8	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EM2202250-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	60	70	15.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	67	72	7.9	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	7	6	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	24	20	19.4	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	9	8	15.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	22	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	13	21	44.6	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	513	502	2.1	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	42	44	4.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	81	78	3.4	0% - 50%
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EA002: pH 1:5 (Soils) (QC Lot: 4178243)									
EM2202101-004	HB-BH04-C-2	EA002: pH Value	----	0.1	pH Unit	7.4	7.5	1.3	0% - 20%
EM2202101-049	HB-TP08-C-3	EA002: pH Value	----	0.1	pH Unit	5.2	5.2	0.0	0% - 20%
EA003 :pH (field/fox) (QC Lot: 4194001)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA003 :pH (field/fox) (QC Lot: 4194001) - continued									
EM2202101-004	HB-BH04-C-2	EA003: pH (F)	----	0.1	pH Unit	7.1	7.2	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	4.7	4.4	5.0	0% - 20%
EA010: Conductivity (1:5) (QC Lot: 4178241)									
EM2202101-004	HB-BH04-C-2	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	204	210	2.9	0% - 20%
EM2202101-049	HB-TP08-C-3	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	39	42	5.6	0% - 20%
EA029-A: pH Measurements (QC Lot: 4190604)									
EB2204426-001	Anonymous	EA029: pH KCl (23A)	----	0.1	pH Unit	7.5	7.6	0.0	0% - 20%
		EA029: pH OX (23B)	----	0.1	pH Unit	7.4	7.3	1.4	0% - 20%
EA029-B: Acidity Trail (QC Lot: 4190604)									
EB2204426-001	Anonymous	EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	<0.020	0.0	No Limit
		EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	<0.020	0.0	No Limit
		EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	<0.020	0.0	No Limit
		EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.0	No Limit
		EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	<2	0.0	No Limit
		EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	<2	0.0	No Limit
EA029-C: Sulfur Trail (QC Lot: 4190604)									
EB2204426-001	Anonymous	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	<0.020	0.0	No Limit
		EA029: Peroxide Sulfur (23De)	----	0.02	% S	0.033	0.035	6.1	No Limit
		EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	0.033	0.035	6.1	No Limit
		EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	21	22	6.1	No Limit
EA029-D: Calcium Values (QC Lot: 4190604)									
EB2204426-001	Anonymous	EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	0.142	0.139	1.9	No Limit
		EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	0.207	0.216	4.4	0% - 50%
		EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	0.065	0.077	16.8	No Limit
		EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	0.052	0.062	16.8	No Limit
		EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	33	39	16.8	No Limit
EA029-E: Magnesium Values (QC Lot: 4190604)									
EB2204426-001	Anonymous	EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	0.031	0.030	0.0	No Limit
		EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	0.057	0.058	2.0	No Limit
		EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	0.026	0.028	6.7	No Limit
		EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	0.034	0.036	6.7	No Limit
		EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	21	23	6.7	No Limit
EA029-H: Acid Base Accounting (QC Lot: 4190604)									
EB2204426-001	Anonymous	EA029: ANC Fineness Factor	----	0.5	-	1.5	1.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA029-H: Acid Base Accounting (QC Lot: 4190604) - continued									
EB2204426-001	Anonymous	EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	<0.02	0.0	No Limit
		EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	0.03	0.04	0.0	No Limit
		EA029: Liming Rate	----	1	kg CaCO3/t	<1	<1	0.0	No Limit
		EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	2	2	0.0	No Limit
		EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	<10	0.0	No Limit
		EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	21	22	6.1	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4178451)									
EM2202101-001	HB-BH04-C-0.1	EA055: Moisture Content	----	0.1	%	4.6	3.8	18.6	No Limit
EM2202101-012	QC001_280122	EA055: Moisture Content	----	0.1	%	12.7	13.5	5.5	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4178452)									
EM2202101-028	HB-TP04-C-0.5	EA055: Moisture Content	----	0.1	%	5.3	4.9	7.3	No Limit
EM2202101-047	HB-TP08-C-1	EA055: Moisture Content	----	0.1	%	48.9	49.1	0.4	0% - 20%
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 4179577)									
EM2201970-022	Anonymous	ED006: Calcium/Magnesium Ratio	----	0.1	-	1.0	1.0	0.0	No Limit
		ED006: Magnesium/Potassium Ratio	----	0.1	-	14.1	14.2	0.9	0% - 20%
		ED006: Exchangeable Calcium Percent	----	0.2	%	36.1	36.4	0.8	0% - 20%
		ED006: Exchangeable Magnesium Percent	----	0.2	%	35.1	35.0	0.0	0% - 20%
		ED006: Exchangeable Potassium Percent	----	0.2	%	2.5	2.5	0.0	0% - 50%
		ED006: Exchangeable Sodium Percent	----	0.2	%	26.3	26.2	0.6	0% - 20%
		ED006: Exchangeable Calcium	----	0.2	meq/100g	4.7	4.7	0.0	0% - 20%
		ED006: Exchangeable Magnesium	----	0.2	meq/100g	4.6	4.5	0.0	0% - 20%
		ED006: Exchangeable Potassium	----	0.2	meq/100g	0.3	0.3	0.0	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	3.4	3.4	0.0	0% - 50%
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	13.0	12.8	1.5	0% - 20%
ED040S: Soluble Major Anions (QC Lot: 4178242)									
EM2202101-004	HB-BH04-C-2	ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	290	280	0.0	0% - 20%
EM2202101-049	HB-TP08-C-3	ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	50	50	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 4178240)									
EM2202101-004	HB-BH04-C-2	ED045G: Chloride	16887-00-6	10	mg/kg	30	20	65.1	No Limit
EM2202101-049	HB-TP08-C-3	ED045G: Chloride	16887-00-6	10	mg/kg	30	30	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4179559)									
EM2202101-001	HB-BH04-C-0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.1	0.0	No Limit
EM2202101-014	HB-TP01-C-1	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.9	1.2	33.3	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4179561)									
EM2202101-053	HB-TP09-C-1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2202250-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4179255)									
EM2202101-003	HB-BH04-C-1.5	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2202154-001	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4178190)									
EM2202101-003	HB-BH04-C-1.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4178193)									
EM2202101-008	HB-BH06-C-0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4178191)									
EM2202101-003	HB-BH04-C-1.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4178194)									
EM2202101-008	HB-BH06-C-0.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4178194) - continued									
EM2202101-008	HB-BH06-C-0.5	EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074B: Oxygenated Compounds (QC Lot: 4178108) - continued									
EM2202101-035	HB-TP06-C-0.1	EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4178108) - continued									
EM2202101-035	HB-TP06-C-0.1	EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074F: Halogenated Aromatic Compounds (QC Lot: 4178108) - continued									
EM2202101-035	HB-TP06-C-0.1	EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 4178108)									
EM2202101-035	HB-TP06-C-0.1	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4178187)									
EM2202101-033	HB-TP05-C-0.5	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 4178187) - continued									
EM2202101-003	HB-BH04-C-1.5	EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4178195)									
EM2202101-040	HB-TP07-C-0.1	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EM2202101-008	HB-BH06-C-0.5	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178187)									
EM2202101-033	HB-TP05-C-0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178187) - continued									
EM2202101-033	HB-TP05-C-0.5	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178195)									
EM2202101-040	HB-TP07-C-0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2202101-008	HB-BH06-C-0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178195) - continued									
EM2202101-008	HB-BH06-C-0.5	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075A: Phenolic Compounds (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit
EP075A: Phenolic Compounds (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075A: Phenolic Compounds (QC Lot: 4178192) - continued									
EM2202101-008	HB-BH06-C-0.5	EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4178192) - continued									
EM2202101-008	HB-BH06-C-0.5	EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075D: Nitrosamines (QC Lot: 4178192) - continued									
EM2202101-008	HB-BH06-C-0.5	EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075F: Haloethers (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075F: Haloethers (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075H: Anilines and Benzidines (QC Lot: 4178189) - continued									
EM2202101-003	HB-BH04-C-1.5	EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075I: Organochlorine Pesticides (QC Lot: 4178192) - continued									
EM2202101-008	HB-BH06-C-0.5	EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 4178189)									
EM2202101-003	HB-BH04-C-1.5	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 4178192)									
EM2202101-008	HB-BH06-C-0.5	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4178107)									
EM2202101-003	HB-BH04-C-1.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4178109)									
EM2202101-001	HB-BH04-C-0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EM2202101-024	HB-TP03-C-1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4178188)									
EM2202101-033	HB-TP05-C-0.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4178188) - continued									
EM2202101-003	HB-BH04-C-1.5	EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4178196)									
EM2202101-040	HB-TP07-C-0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4178107)									
EM2202101-003	HB-BH04-C-1.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4178109)									
EM2202101-001	HB-BH04-C-0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EM2202101-024	HB-TP03-C-1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4178188)									
EM2202101-033	HB-TP05-C-0.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2202101-003	HB-BH04-C-1.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4178196)									
EM2202101-040	HB-TP07-C-0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	120	110	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	120	110	8.7	No Limit
EP080: BTEXN (QC Lot: 4178107)									
EM2202101-003	HB-BH04-C-1.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 4178109)									
EM2202101-001	HB-BH04-C-0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4178109) - continued									
EM2202101-001	HB-BH04-C-0.1	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EM2202101-024	HB-TP03-C-1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4179555)									
EM2202101-005	HB-BH05-C-0.1	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2202101-050	HB-TP09-C-0.1	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4179555)									
EM2202101-005	HB-BH05-C-0.1	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EM2202101-050	HB-TP09-C-0.1	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4179555) - continued									
EM2202101-050	HB-TP09-C-0.1	EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4179555)									
EM2202101-005	HB-BH05-C-0.1	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2202101-050	HB-TP09-C-0.1	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4179555)									
EM2202101-005	HB-BH05-C-0.1	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4179555) - continued									
EM2202101-050	HB-TP09-C-0.1	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4179555)									
EM2202101-005	HB-BH05-C-0.1	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2202101-050	HB-TP09-C-0.1	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4179558)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	101	70.0	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	99.3 mg/kg	93.1	70.0	130
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	0.67 mg/kg	100	70.0	130
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	79.2	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	101	70.0	130
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	11.2 mg/kg	87.5	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	94.9	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	93.8	70.0	130
EG005T: Manganese	7439-96-5	5	mg/kg	<5	590 mg/kg	93.4	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	94.3	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	61.3 mg/kg	97.3	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	73.5	70.0	130
EG005T: Titanium	7440-32-6	10	mg/kg	<10	958 mg/kg	102	70.0	130
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4179560)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	102	70.0	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	99.3 mg/kg	94.2	70.0	130
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	0.67 mg/kg	103	70.0	130
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	80.2	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	102	70.0	130
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	11.2 mg/kg	87.2	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	95.4	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	94.5	70.0	130
EG005T: Manganese	7439-96-5	5	mg/kg	<5	590 mg/kg	93.8	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	94.8	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	61.3 mg/kg	97.9	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	73.6	70.0	130
EG005T: Titanium	7440-32-6	10	mg/kg	<10	958 mg/kg	104	70.0	130
EA002: pH 1:5 (Soils) (QCLot: 4178243)								
EA002: pH Value	----	----	pH Unit	----	4 pH Unit	100	98.8	101
				----	7 pH Unit	100	99.3	101

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EA010: Conductivity (1:5) (QCLot: 4178241)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	1413 µS/cm	99.8	94.5	105
EA029-A: pH Measurements (QCLot: 4190604)								
EA029: pH KCl (23A)	----	0.1	pH Unit	<0.1	4.4 pH Unit	99.1	70.0	130
EA029: pH OX (23B)	----	0.1	pH Unit	<0.1	4.2 pH Unit	105	70.0	130
EA029-B: Acidity Trail (QCLot: 4190604)								
EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	19 mole H+ / t	75.9	70.0	130
EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	27.5 mole H+ / t	85.7	70.0	130
EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	----	----	----	----
EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029-C: Sulfur Trail (QCLot: 4190604)								
EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	0.03595 % S	120	70.0	130
EA029: Peroxide Sulfur (23De)	----	0.02	% S	<0.020	0.14405 % S	109	70.0	130
EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	<0.020	----	----	----	----
EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	----	----	----	----
EA029-D: Calcium Values (QCLot: 4190604)								
EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	<0.020	0.22443 % Ca	110	70.0	130
EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	<0.020	0.22637 % Ca	110	70.0	130
EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	----	----	----	----
EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	----	----	----	----
EA029-E: Magnesium Values (QCLot: 4190604)								
EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	<0.020	0.20621 % Mg	100	70.0	130
EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	<0.020	0.23199 % Mg	110	70.0	130
EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	----	----	----	----
EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	<0.020	----	----	----	----
EA029-G: Retained Acidity (QCLot: 4190604)								
EA029: Net Acid Soluble Sulfur (20Je)	----	0.02	% S	<0.020	----	----	----	----
EA029: acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: HCl Extractable Sulfur (20Be)	----	0.02	% S	<0.020	0.696 % S	97.7	70.0	130
EA029-H: Acid Base Accounting (QCLot: 4190604)								
EA029: ANC Fineness Factor	----	0.5	-	<0.5	----	----	----	----
EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate	----	1	kg CaCO3/t	<1	----	----	----	----

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EA029-H: Acid Base Accounting (QCLot: 4190604) - continued								
EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	----	----	----	----
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 4179577)								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	33 meq/100g	77.0	66.6	101
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	32 meq/100g	72.0	66.9	120
ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	2.2 meq/100g	93.4	72.8	119
ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	5.6 meq/100g	83.9	67.5	112
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Calcium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Exchangeable Magnesium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Exchangeable Potassium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Calcium/Magnesium Ratio	----	0.1	-	<0.1	----	----	----	----
ED006: Magnesium/Potassium Ratio	----	0.1	-	<0.1	----	----	----	----
ED040S: Soluble Major Anions (QCLot: 4178242)								
ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	<10	----	----	----	----
ED045G: Chloride by Discrete Analyser (QCLot: 4178240)								
ED045G: Chloride	16887-00-6	10	mg/kg	<10	50 mg/kg	96.1	85.5	120
				<10	5000 mg/kg	98.7	85.5	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4179559)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	90.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4179561)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	85.9	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4179255)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	84.3	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4178190)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	89.8	68.0	133
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4178193)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	105	68.0	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 4178191)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	102	70.0	124
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	69.2	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	66.6	122

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 4178191) - continued								
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	68.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	122	67.2	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	115	66.0	126
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	113	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	110	68.0	122
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	68.9	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	112	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	67.9	124
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	112	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	113	62.4	131
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	104	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	108	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	112	55.5	132
EP068A: Organochlorine Pesticides (OC) (QCLot: 4178194)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	102	70.0	124
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	69.2	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	66.6	122
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	68.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	122	67.2	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	115	66.0	126
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	113	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	110	68.0	122
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	68.9	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	112	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	67.9	124
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	112	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	113	62.4	131
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	104	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	108	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	112	55.5	132
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4178108)								
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.9	66.4	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4178108) - continued								
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	87.1	70.6	116
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	91.7	70.4	117
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	92.0	70.0	119
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	86.1	70.8	115
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	92.7	72.6	120
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	88.0	68.6	116
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	82.8	59.8	113
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	84.7	63.4	112
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	86.6	61.5	114
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	87.4	63.1	112
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	87.6	63.6	113
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	85.9	60.8	114
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	79.1	54.9	113
EP074B: Oxygenated Compounds (QCLot: 4178108)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	99.4	51.4	128
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	102	61.2	128
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	102	63.2	137
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	91.9	65.0	130
EP074C: Sulfonated Compounds (QCLot: 4178108)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	94.4	48.5	132
EP074D: Fumigants (QCLot: 4178108)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	95.6	61.4	116
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	93.5	70.1	116
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	90.0	61.7	112
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	89.2	63.8	110
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	85.0	67.0	114
EP074E: Halogenated Aliphatic Compounds (QCLot: 4178108)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	91.0	26.0	137
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	104	49.4	140
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	108	46.0	138
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	98.4	39.1	127
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	93.2	59.2	128
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	96.9	60.1	124
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	95.8	55.2	122
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	56.2	47.0	125
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	95.3	63.6	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	103	64.5	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 4178108) - continued								
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	98.3	67.5	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	96.9	57.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	97.3	60.3	120
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	89.4	57.7	113
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	97.4	68.9	117
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	102	65.5	119
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	92.5	68.4	115
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	97.5	69.8	118
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	94.0	70.6	118
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	88.6	65.6	117
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	82.9	62.8	106
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	86.2	58.9	117
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	75.8	57.8	110
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	102	72.3	127
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	95.4	69.0	123
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	80.4	59.0	100
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	83.9	60.8	111
EP074F: Halogenated Aromatic Compounds (QCLot: 4178108)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	90.2	72.5	115
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	86.6	69.2	112
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	85.5	65.9	114
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	86.6	65.4	113
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	86.1	59.3	123
EP074G: Trihalomethanes (QCLot: 4178108)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	96.7	67.5	119
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	96.1	57.8	117
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	86.4	60.3	108
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	82.7	55.7	108
EP075(SIM)A: Phenolic Compounds (QCLot: 4178187)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	3 mg/kg	87.7	81.2	121
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	3 mg/kg	88.7	83.2	120
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	3 mg/kg	88.8	81.6	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	6 mg/kg	87.3	79.7	129
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	3 mg/kg	81.5	49.8	129
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	3 mg/kg	87.4	81.5	127
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	3 mg/kg	88.0	74.2	125
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	3 mg/kg	90.5	79.8	121
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	3 mg/kg	84.1	71.5	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 4178187) - continued								
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	3 mg/kg	85.9	67.8	119
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	3 mg/kg	88.7	64.5	126
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	6 mg/kg	73.6	9.68	118
EP075(SIM)A: Phenolic Compounds (QCLot: 4178195)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	3 mg/kg	99.4	81.2	121
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	3 mg/kg	99.5	83.2	120
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	3 mg/kg	96.7	81.6	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	6 mg/kg	95.2	79.7	129
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	3 mg/kg	89.8	49.8	129
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	3 mg/kg	94.7	81.5	127
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	3 mg/kg	93.6	74.2	125
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	3 mg/kg	97.8	79.8	121
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	3 mg/kg	84.6	71.5	121
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	3 mg/kg	87.7	67.8	119
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	3 mg/kg	76.9	64.5	126
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	6 mg/kg	49.0	9.68	118
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178187)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	89.5	85.7	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	86.9	81.0	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	88.4	83.6	120
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	84.7	81.3	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	88.1	79.4	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	91.1	81.7	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	89.7	78.3	124
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	90.9	79.9	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	89.8	76.9	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	100	80.9	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	80.1	70.0	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	88.8	80.4	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	82.5	70.2	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	77.2	67.9	122
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	77.5	65.8	123
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	80.8	65.8	127
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178195)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	99.3	85.7	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	97.7	81.0	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	98.2	83.6	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178195) - continued								
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	92.6	81.3	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	97.7	79.4	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	108	81.7	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	102	78.3	124
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	103	79.9	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	98.6	76.9	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	108	80.9	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	82.3	70.0	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	97.3	80.4	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	89.6	70.2	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	87.8	67.9	122
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	87.6	65.8	123
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	93.4	65.8	127
EP075A: Phenolic Compounds (QCLot: 4178189)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	1.5 mg/kg	90.1	75.1	127
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	1.5 mg/kg	90.5	77.7	123
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	1.5 mg/kg	90.7	72.1	127
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	1.5 mg/kg	94.6	73.1	127
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	87.4	64.0	126
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	1.5 mg/kg	92.1	74.4	126
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	1.5 mg/kg	89.4	69.2	123
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	1.5 mg/kg	88.2	76.2	122
EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	1.5 mg/kg	87.7	68.9	124
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	1.5 mg/kg	82.0	65.5	123
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	1.5 mg/kg	82.5	61.0	123
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	1.5 mg/kg	77.4	43.1	131
EP075A: Phenolic Compounds (QCLot: 4178192)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	1.5 mg/kg	117	75.1	127
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	1.5 mg/kg	111	77.7	123
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	1.5 mg/kg	111	72.1	127
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	1.5 mg/kg	104	73.1	127
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	124	64.0	126
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	1.5 mg/kg	114	74.4	126
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	1.5 mg/kg	110	69.2	123
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	1.5 mg/kg	115	76.2	122
EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	1.5 mg/kg	112	68.9	124
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	1.5 mg/kg	105	65.5	123
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	1.5 mg/kg	101	61.0	123

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075A: Phenolic Compounds (QCLot: 4178192) - continued								
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	1.5 mg/kg	112	43.1	131
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178189)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	1.5 mg/kg	89.2	78.7	126
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	1.5 mg/kg	87.0	77.5	126
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	1.5 mg/kg	85.3	74.7	126
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.5 mg/kg	86.4	77.2	126
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	1.5 mg/kg	102	75.7	126
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	105	78.6	126
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.5 mg/kg	90.8	78.1	128
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	90.5	77.1	130
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	76.2	132
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	70.7	135
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	1.5 mg/kg	89.1	63.8	134
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	92.8	75.1	133
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	1.5 mg/kg	96.7	76.2	132
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	3 mg/kg	87.2	76.5	128
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	1.5 mg/kg	86.9	75.7	134
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.5 mg/kg	84.3	72.4	128
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	1.5 mg/kg	85.3	70.6	130
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.5 mg/kg	82.4	68.7	123
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	1.5 mg/kg	82.1	69.7	123
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	67.3	125
EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178192)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	1.5 mg/kg	113	78.7	126
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	1.5 mg/kg	117	77.5	126
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	1.5 mg/kg	112	74.7	126
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.5 mg/kg	96.8	77.2	126
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	1.5 mg/kg	119	75.7	126
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	116	78.6	126
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.5 mg/kg	112	78.1	128
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	108	77.1	130
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	1.5 mg/kg	111	76.2	132
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	1.5 mg/kg	116	70.7	135
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	1.5 mg/kg	117	63.8	134
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	112	75.1	133
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	1.5 mg/kg	120	76.2	132

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178192) - continued								
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	3 mg/kg	120	76.5	128
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	1.5 mg/kg	123	75.7	134
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.5 mg/kg	113	72.4	128
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	1.5 mg/kg	113	70.6	130
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.5 mg/kg	112	68.7	123
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	1.5 mg/kg	110	69.7	123
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	1.5 mg/kg	115	67.3	125
EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
EP075C: Phthalate Esters (QCLot: 4178189)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	1.5 mg/kg	86.3	74.6	125
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	1.5 mg/kg	98.0	76.7	126
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	1.5 mg/kg	91.5	76.0	132
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	1.5 mg/kg	93.2	74.1	134
EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<0.5	1.5 mg/kg	96.3	74.1	122
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	1.5 mg/kg	90.8	73.5	130
EP075C: Phthalate Esters (QCLot: 4178192)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	1.5 mg/kg	110	74.6	125
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	1.5 mg/kg	112	76.7	126
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	1.5 mg/kg	113	76.0	132
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	1.5 mg/kg	112	74.1	134
EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<0.5	1.5 mg/kg	120	74.1	122
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	1.5 mg/kg	114	73.5	130
EP075D: Nitrosamines (QCLot: 4178189)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	1.5 mg/kg	92.2	65.0	136
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	1.5 mg/kg	92.2	68.8	130
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	67.7	126
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	1.5 mg/kg	93.0	69.3	130
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	1.5 mg/kg	95.0	70.8	130
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	1.5 mg/kg	90.2	73.3	128
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	1.5 mg/kg	88.5	60.6	136
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<0.5	1.5 mg/kg	99.3	74.0	125
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	1.5 mg/kg	60.4	10.0	115
EP075D: Nitrosamines (QCLot: 4178192)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	1.5 mg/kg	115	65.0	136
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	1.5 mg/kg	113	68.8	130
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	1.5 mg/kg	115	67.7	126

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075D: Nitrosamines (QCLot: 4178192) - continued								
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	1.5 mg/kg	126	69.3	130
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	1.5 mg/kg	118	70.8	130
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	1.5 mg/kg	121	73.3	128
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	1.5 mg/kg	117	60.6	136
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<0.5	1.5 mg/kg	114	74.0	125
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	1.5 mg/kg	55.6	10.0	115
EP075E: Nitroaromatics and Ketones (QCLot: 4178189)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	1.5 mg/kg	98.3	54.0	131
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	76.6	125
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	1.5 mg/kg	93.4	75.7	125
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	76.8	126
EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	70.5	124
EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	1.5 mg/kg	96.5	68.3	124
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	1.5 mg/kg	73.2	10.0	107
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	1.5 mg/kg	72.2	10.0	134
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	1.5 mg/kg	94.6	56.8	132
EP075: Azobenzene	103-33-3	1	mg/kg	<1	1.5 mg/kg	102	74.4	125
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	1.5 mg/kg	86.3	37.9	132
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	1.5 mg/kg	97.7	69.7	128
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	1.5 mg/kg	115	25.6	130
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	1.5 mg/kg	95.3	74.9	127
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	1.5 mg/kg	93.0	77.2	132
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	1.5 mg/kg	88.8	71.4	132
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	1.5 mg/kg	89.9	73.4	131
EP075E: Nitroaromatics and Ketones (QCLot: 4178192)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	1.5 mg/kg	104	54.0	131
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	1.5 mg/kg	116	76.6	125
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	1.5 mg/kg	115	75.7	125
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	1.5 mg/kg	114	76.8	126
EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	1.5 mg/kg	106	70.5	124
EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	1.5 mg/kg	110	68.3	124
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	1.5 mg/kg	49.3	10.0	107
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	1.5 mg/kg	120	10.0	134
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	1.5 mg/kg	105	56.8	132
EP075: Azobenzene	103-33-3	1	mg/kg	<1	1.5 mg/kg	116	74.4	125
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	1.5 mg/kg	108	37.9	132
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	1.5 mg/kg	112	69.7	128
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	1.5 mg/kg	83.0	25.6	130

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075E: Nitroaromatics and Ketones (QCLot: 4178192) - continued								
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	1.5 mg/kg	111	74.9	127
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	1.5 mg/kg	112	77.2	132
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	1.5 mg/kg	110	71.4	132
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	1.5 mg/kg	118	73.4	131
EP075F: Haloethers (QCLot: 4178189)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	1.5 mg/kg	94.6	74.0	131
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	1.5 mg/kg	93.0	75.2	127
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	1.5 mg/kg	104	77.0	126
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	97.5	73.9	125
EP075F: Haloethers (QCLot: 4178192)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	1.5 mg/kg	115	74.0	131
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	1.5 mg/kg	112	75.2	127
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	1.5 mg/kg	113	77.0	126
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	113	73.9	125
EP075G: Chlorinated Hydrocarbons (QCLot: 4178189)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1.5 mg/kg	91.3	77.9	123
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	77.3	124
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1.5 mg/kg	90.6	76.8	125
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	1.5 mg/kg	86.7	73.1	125
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1.5 mg/kg	90.2	72.8	125
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	64.5	131
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1.5 mg/kg	88.3	75.8	127
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	67.0	10.0	128
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	1.5 mg/kg	99.3	76.7	125
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	1.5 mg/kg	98.4	75.1	128
EP075G: Chlorinated Hydrocarbons (QCLot: 4178192)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1.5 mg/kg	117	77.9	123
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1.5 mg/kg	115	77.3	124
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1.5 mg/kg	119	76.8	125
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	1.5 mg/kg	117	73.1	125
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1.5 mg/kg	118	72.8	125
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	1.5 mg/kg	120	64.5	131
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1.5 mg/kg	117	75.8	127
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	104	10.0	128
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	1.5 mg/kg	114	76.7	125
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	1.5 mg/kg	121	75.1	128
EP075H: Anilines and Benzidines (QCLot: 4178189)								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	1.5 mg/kg	80.3	40.2	131

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075H: Anilines and Benzidines (QCLot: 4178189) - continued								
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	1.5 mg/kg	65.3	10.0	114
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	1.5 mg/kg	84.9	65.9	122
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	1.5 mg/kg	89.9	40.6	137
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	1.5 mg/kg	101	78.0	126
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	1.5 mg/kg	100	54.4	137
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.0	67.3	134
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	1.5 mg/kg	118	72.6	130
EP075H: Anilines and Benzidines (QCLot: 4178192)								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	1.5 mg/kg	101	40.2	131
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	1.5 mg/kg	75.0	10.0	114
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	1.5 mg/kg	104	65.9	122
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	1.5 mg/kg	99.2	40.6	137
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	1.5 mg/kg	115	78.0	126
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	1.5 mg/kg	110	54.4	137
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	1.5 mg/kg	121	67.3	134
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	1.5 mg/kg	113	72.6	130
EP075I: Organochlorine Pesticides (QCLot: 4178189)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	1.5 mg/kg	99.4	76.6	127
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	1.5 mg/kg	102	72.5	132
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	1.5 mg/kg	104	75.3	129
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	1.5 mg/kg	93.5	72.1	133
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	1.5 mg/kg	88.0	71.5	131
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	1.5 mg/kg	91.5	74.7	132
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	1.5 mg/kg	90.7	73.1	132
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	1.5 mg/kg	99.2	72.8	132
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	1.5 mg/kg	93.9	76.1	129
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	1.5 mg/kg	96.9	74.7	133
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	1.5 mg/kg	100	70.4	129
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	1.5 mg/kg	94.9	72.1	129
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	1.5 mg/kg	94.4	75.0	130
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.3	67.2	137
EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	57.5	136
EP075I: Organochlorine Pesticides (QCLot: 4178192)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	1.5 mg/kg	114	76.6	127
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	1.5 mg/kg	120	72.5	132
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	1.5 mg/kg	120	75.3	129
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	1.5 mg/kg	121	72.1	133
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	1.5 mg/kg	117	71.5	131

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075I: Organochlorine Pesticides (QCLot: 4178192) - continued								
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	1.5 mg/kg	104	74.7	132
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	1.5 mg/kg	114	73.1	132
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	1.5 mg/kg	104	72.8	132
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	1.5 mg/kg	108	76.1	129
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	1.5 mg/kg	107	74.7	133
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	1.5 mg/kg	127	70.4	129
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	1.5 mg/kg	122	72.1	129
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	1.5 mg/kg	111	75.0	130
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	1.5 mg/kg	133	67.2	137
EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<0.5	1.5 mg/kg	113	57.5	136
EP075J: Organophosphorus Pesticides (QCLot: 4178189)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	85.4	65.4	123
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	49.2	138
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	1.5 mg/kg	101	75.8	132
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	1.5 mg/kg	85.7	70.9	129
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	91.9	67.9	134
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	1.5 mg/kg	88.3	73.2	131
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	76.3	130
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	1.5 mg/kg	91.3	74.5	133
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	1.5 mg/kg	95.1	55.3	131
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	1.5 mg/kg	95.8	75.2	130
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	1.5 mg/kg	104	76.5	130
EP075J: Organophosphorus Pesticides (QCLot: 4178192)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	113	65.4	123
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	1.5 mg/kg	101	49.2	138
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	1.5 mg/kg	126	75.8	132
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	1.5 mg/kg	111	70.9	129
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	116	67.9	134
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	1.5 mg/kg	110	73.2	131
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	1.5 mg/kg	108	76.3	130
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	1.5 mg/kg	116	74.5	133
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	1.5 mg/kg	125	55.3	131
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	1.5 mg/kg	115	75.2	130
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	1.5 mg/kg	124	76.5	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178107)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	99.9	58.6	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178109)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	90.4	58.6	131

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178188)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	97.9	75.0	128
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	98.6	82.0	123
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	102	82.4	121
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	99.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178196)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	90.9	75.0	128
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	92.0	82.0	123
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	92.3	82.4	121
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	91.9	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178107)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	97.6	59.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178109)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	88.1	59.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178188)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	96.1	77.0	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	100	81.5	120
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	104	73.3	137
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	99.6	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178196)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	90.0	77.0	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	92.0	81.5	120
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	89.6	73.3	137
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	91.4	70.0	130
EP080: BTEXN (QCLot: 4178107)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	97.9	61.6	117
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	97.8	65.8	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	100.0	65.8	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	101	64.8	134
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	100	68.7	132
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	85.6	61.8	123
EP080: BTEXN (QCLot: 4178109)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	90.4	61.6	117
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	88.0	65.8	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	90.9	65.8	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	94.3	64.8	134
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	96.9	68.7	132

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 4178109) - continued								
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	85.6	61.8	123
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4179555)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	122	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	96.5	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	91.7	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	95.7	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	81.4	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	113	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4179555)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	78.7	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.1	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.5	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.2	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	# 134	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.0	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.3	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4179555)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	73.1	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	111	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.1	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	77.1	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.0	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	67.2	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4179555)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	88.9	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 mg/kg	82.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	86.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00121 mg/kg	71.2	70.0	130
EP231P: PFAS Sums (QCLot: 4179555)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231P: PFAS Sums (QCLot: 4179555) - continued								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4179558)							
EM2202101-003	HB-BH04-C-1.5	EG005T: Arsenic	7440-38-2	50 mg/kg	99.9	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	102	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	101	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	105	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	101	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	102	80.0	120
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4179560)							
EM2202154-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.7	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.4	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	97.0	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	98.6	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	96.5	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	99.6	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	92.8	80.0	120
ED045G: Chloride by Discrete Analyser (QCLot: 4178240)							
EM2202101-007	HB-BH05-C-1	ED045G: Chloride	16887-00-6	2000 mg/kg	110	93.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4179559)							
EM2202101-003	HB-BH04-C-1.5	EG035T: Mercury	7439-97-6	0.5 mg/kg	103	76.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4179561)							
EM2202154-001	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	102	76.0	116
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4179255)							
EM2202101-004	HB-BH04-C-2	EK026SF: Total Cyanide	57-12-5	20 mg/kg	97.8	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4178190)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4178190) - continued							
EM2202101-004	HB-BH04-C-2	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	94.6	63.2	144
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4178193)							
EM2202101-022	HB-TP03-C-0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	96.3	63.2	144
EP068A: Organochlorine Pesticides (OC) (QCLot: 4178191)							
EM2202101-005	HB-BH05-C-0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	81.5	51.4	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	89.7	49.1	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	101	38.4	135
		EP068: Dieldrin	60-57-1	0.5 mg/kg	107	58.4	136
		EP068: Endrin	72-20-8	0.5 mg/kg	109	33.0	146
		EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	94.8	20.0	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 4178194)							
EM2202101-028	HB-TP04-C-0.5	EP068: gamma-BHC	58-89-9	0.5 mg/kg	92.3	51.4	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	104	49.1	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	115	38.4	135
		EP068: Dieldrin	60-57-1	0.5 mg/kg	127	58.4	136
		EP068: Endrin	72-20-8	0.5 mg/kg	129	33.0	146
		EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	109	20.0	133
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4178108)							
EM2202101-004	HB-BH04-C-2	EP074: Benzene	71-43-2	2 mg/kg	69.1	51.0	137
		EP074: Toluene	108-88-3	2 mg/kg	56.4	54.0	141
EP074E: Halogenated Aliphatic Compounds (QCLot: 4178108)							
EM2202101-004	HB-BH04-C-2	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	58.7	29.0	141
		EP074: Trichloroethene	79-01-6	2 mg/kg	61.1	50.0	126
EP074F: Halogenated Aromatic Compounds (QCLot: 4178108)							
EM2202101-004	HB-BH04-C-2	EP074: Chlorobenzene	108-90-7	2 mg/kg	65.5	65.0	133
EP075(SIM)A: Phenolic Compounds (QCLot: 4178187)							
EM2202101-001	HB-BH04-C-0.1	EP075(SIM): Phenol	108-95-2	3 mg/kg	86.1	77.1	119
		EP075(SIM): 2-Chlorophenol	95-57-8	3 mg/kg	89.3	78.9	123
		EP075(SIM): 2-Nitrophenol	88-75-5	3 mg/kg	102	43.8	136
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	80.6	61.5	120
		EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	73.0	15.3	139
EP075(SIM)A: Phenolic Compounds (QCLot: 4178195)							
EM2202101-009	HB-BH06-C-1	EP075(SIM): Phenol	108-95-2	3 mg/kg	98.7	77.1	119
		EP075(SIM): 2-Chlorophenol	95-57-8	3 mg/kg	100	78.9	123
		EP075(SIM): 2-Nitrophenol	88-75-5	3 mg/kg	95.3	43.8	136
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	61.6	61.5	120

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 4178195) - continued							
EM2202101-009	HB-BH06-C-1	EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	56.2	15.3	139
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178187)							
EM2202101-001	HB-BH04-C-0.1	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	83.2	77.2	116
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	90.0	65.5	136
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178195)							
EM2202101-009	HB-BH06-C-1	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	92.0	77.2	116
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	105	65.5	136
EP075A: Phenolic Compounds (QCLot: 4178189)							
EM2202101-004	HB-BH04-C-2	EP075: Phenol	108-95-2	3 mg/kg	87.0	64.9	129
		EP075: 2-Chlorophenol	95-57-8	3 mg/kg	86.4	66.9	121
		EP075: 2-Nitrophenol	88-75-5	3 mg/kg	77.2	44.3	124
		EP075: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	79.5	47.5	130
		EP075: Pentachlorophenol	87-86-5	3 mg/kg	46.8	19.1	134
EP075A: Phenolic Compounds (QCLot: 4178192)							
EM2202101-022	HB-TP03-C-0.1	EP075: Phenol	108-95-2	3 mg/kg	93.7	64.9	129
		EP075: 2-Chlorophenol	95-57-8	3 mg/kg	99.9	66.9	121
		EP075: 2-Nitrophenol	88-75-5	3 mg/kg	102	44.3	124
		EP075: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	80.2	47.5	130
		EP075: Pentachlorophenol	87-86-5	3 mg/kg	101	19.1	134
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178189)							
EM2202101-004	HB-BH04-C-2	EP075: Acenaphthene	83-32-9	3 mg/kg	84.8	77.1	115
		EP075: Pyrene	129-00-0	3 mg/kg	55.9	54.4	136
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4178192)							
EM2202101-022	HB-TP03-C-0.1	EP075: Acenaphthene	83-32-9	3 mg/kg	102	77.1	115
		EP075: Pyrene	129-00-0	3 mg/kg	106	54.4	136
EP075D: Nitrosamines (QCLot: 4178189)							
EM2202101-004	HB-BH04-C-2	EP075: N-Nitrosodi-n-propylamine	621-64-7	1.25 mg/kg	96.3	62.3	120
EP075D: Nitrosamines (QCLot: 4178192)							
EM2202101-022	HB-TP03-C-0.1	EP075: N-Nitrosodi-n-propylamine	621-64-7	1.25 mg/kg	102	62.3	120
EP075E: Nitroaromatics and Ketones (QCLot: 4178189)							
EM2202101-004	HB-BH04-C-2	EP075: 2.4-Dinitrotoluene	121-14-2	3 mg/kg	76.6	47.3	118
EP075E: Nitroaromatics and Ketones (QCLot: 4178192)							
EM2202101-022	HB-TP03-C-0.1	EP075: 2.4-Dinitrotoluene	121-14-2	3 mg/kg	105	47.3	118
EP075G: Chlorinated Hydrocarbons (QCLot: 4178189)							
EM2202101-004	HB-BH04-C-2	EP075: 1.4-Dichlorobenzene	106-46-7	3 mg/kg	89.0	78.6	115

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075G: Chlorinated Hydrocarbons (QCLot: 4178189) - continued							
EM2202101-004	HB-BH04-C-2	EP075: 1.2.4-Trichlorobenzene	120-82-1	3 mg/kg	87.2	75.2	122
EP075G: Chlorinated Hydrocarbons (QCLot: 4178192)							
EM2202101-022	HB-TP03-C-0.1	EP075: 1.4-Dichlorobenzene	106-46-7	3 mg/kg	106	78.6	115
		EP075: 1.2.4-Trichlorobenzene	120-82-1	3 mg/kg	100	75.2	122
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178107)							
EM2202101-004	HB-BH04-C-2	EP080: C6 - C9 Fraction	----	28 mg/kg	67.9	33.4	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178109)							
EM2202101-006	HB-BH05-C-0.5	EP080: C6 - C9 Fraction	----	28 mg/kg	57.5	33.4	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178188)							
EM2202101-003	HB-BH04-C-1.5	EP071: C10 - C14 Fraction	----	760 mg/kg	97.2	71.2	125
		EP071: C15 - C28 Fraction	----	3270 mg/kg	97.7	75.6	122
		EP071: C29 - C36 Fraction	----	1550 mg/kg	102	78.0	120
		EP071: C10 - C36 Fraction (sum)	----	5580 mg/kg	100	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4178196)							
EM2202101-010	HB-BH06-C-2	EP071: C10 - C14 Fraction	----	760 mg/kg	90.3	71.2	125
		EP071: C15 - C28 Fraction	----	3270 mg/kg	90.2	75.6	122
		EP071: C29 - C36 Fraction	----	1550 mg/kg	90.5	78.0	120
		EP071: C10 - C36 Fraction (sum)	----	5580 mg/kg	89.8	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178107)							
EM2202101-004	HB-BH04-C-2	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	64.4	30.8	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178109)							
EM2202101-006	HB-BH05-C-0.5	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	52.7	30.8	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178188)							
EM2202101-003	HB-BH04-C-1.5	EP071: >C10 - C16 Fraction	----	1110 mg/kg	95.1	72.2	128
		EP071: >C16 - C34 Fraction	----	4180 mg/kg	99.7	76.5	119
		EP071: >C34 - C40 Fraction	----	290 mg/kg	108	66.8	138
		EP071: >C10 - C40 Fraction (sum)	----	5580 mg/kg	101	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4178196)							
EM2202101-010	HB-BH06-C-2	EP071: >C10 - C16 Fraction	----	1110 mg/kg	89.0	72.2	128
		EP071: >C16 - C34 Fraction	----	4180 mg/kg	90.3	76.5	119
		EP071: >C34 - C40 Fraction	----	290 mg/kg	87.3	66.8	138
		EP071: >C10 - C40 Fraction (sum)	----	5580 mg/kg	89.6	70.0	130
EP080: BTEXN (QCLot: 4178107)							
EM2202101-004	HB-BH04-C-2	EP080: Benzene	71-43-2	2 mg/kg	64.8	54.4	127
		EP080: Toluene	108-88-3	2 mg/kg	66.1	57.1	131

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 4178109)							
EM2202101-006	HB-BH05-C-0.5	EP080: Benzene	71-43-2	2 mg/kg	66.4	54.4	127
		EP080: Toluene	108-88-3	2 mg/kg	68.7	57.1	131
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4179555)							
EM2202101-008	HB-BH06-C-0.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	120	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	112	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	106	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	88.6	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	83.7	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	99.7	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4179555)							
EM2202101-008	HB-BH06-C-0.5	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	77.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	90.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	96.0	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	96.9	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	97.4	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	100	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	120	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	90.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	92.0	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	81.6	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	128	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4179555)							
EM2202101-008	HB-BH06-C-0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	69.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	93.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	88.9	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	122	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	72.8	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	99.9	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4179555)							
EM2202101-008	HB-BH06-C-0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	93.7	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	95.0	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	82.0	65.0	137

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4179555) - continued							
EM2202101-008	HB-BH06-C-0.5	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	# 66.3	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2202101**	Page	: 1 of 33
Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	[redacted]	Telephone	: +6138549 9645
Project	: IS360318	Date Samples Received	: 11-Feb-2022
Site	: ----	Issue Date	: 25-Feb-2022
Sampler	: AV	No. of samples received	: 55
Order number	: ----	No. of samples analysed	: 47

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	QC-4179555-001	----	**Perfluorodecanoic acid (PFDA)**	335-76-2	134 %	69.0-133%	**Recovery greater than upper control limit**
Matrix Spike (MS) Recoveries							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2202101--008	HB-BH06-C-0.5	**10:2 Fluorotelomer sulfonic acid (10:2 FTS)**	120226-60-0	66.3 %	70.0-130%	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA002: pH 1:5 (Soils)						
Soil Glass Jar - Unpreserved HB-TP01-C-0.1, HB-TP02-C-0.5, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	17-Feb-2022	04-Feb-2022	**13**	----	----	----
Soil Glass Jar - Unpreserved HB-BH04-C-2, HB-BH05-C-1, HB-BH06-C-2, HB-TP03-C-3, HB-TP04-C-3, HB-TP08-C-3, HB-TP09-C-1	17-Feb-2022	07-Feb-2022	**10**	----	----	----
EA010: Conductivity (1:5)						
Soil Glass Jar - Unpreserved HB-TP01-C-0.1, HB-TP02-C-0.5, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	17-Feb-2022	04-Feb-2022	**13**	----	----	----
Soil Glass Jar - Unpreserved HB-BH04-C-2, HB-BH05-C-1, HB-BH06-C-2, HB-TP03-C-3, HB-TP04-C-3, HB-TP08-C-3, HB-TP09-C-1	17-Feb-2022	07-Feb-2022	**10**	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C) - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.1,	QC001_280122,	----	----	----	17-Feb-2022	11-Feb-2022	**6**
HB-TP01-C-0.5,	HB-TP01-C-1,						
HB-TP02-C-0.5,	HB-TP02-C-1,						
HB-TP02-C-2,	HB-TP05-C-0.5,						
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP06-C-1,	HB-TP07-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-0.1,	HB-BH04-C-1.5,	----	----	----	17-Feb-2022	14-Feb-2022	**3**
HB-BH04-C-2,	HB-BH05-C-0.1,						
HB-BH05-C-0.5,	HB-BH05-C-1,						
HB-BH06-C-0.5,	HB-BH06-C-1,						
HB-BH06-C-2,	HB-TP03-C-0.1,						
HB-TP03-C-1,	HB-TP03-C-3,						
HB-TP04-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP04-C-3,						
HB-TP08-C-0.5,	HB-TP08-C-1,						
HB-TP08-C-3,	HB-TP09-C-0.1,						
HB-TP09-C-1							
EK026SF: Total CN by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP066: Polychlorinated Biphenyls (PCB) - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP074C: Sulfonated Compounds							

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP074C: Sulfonated Compounds - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**
Soil Glass Jar - Unpreserved HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
EP074D: Fumigants						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**
Soil Glass Jar - Unpreserved HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
EP074E: Halogenated Aliphatic Compounds						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**
Soil Glass Jar - Unpreserved HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
EP074F: Halogenated Aromatic Compounds						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP074F: Halogenated Aromatic Compounds - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	04-Feb-2022	**13**	17-Feb-2022	04-Feb-2022	**13**
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	07-Feb-2022	**10**	17-Feb-2022	07-Feb-2022	**10**
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.1,	QC001_280122,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP01-C-1,	HB-TP02-C-0.5,						
HB-TP02-C-2,	HB-TP05-C-0.5,						
HB-TP06-C-1,	HB-TP07-C-0.1						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
HB-BH04-C-0.1, HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.5, HB-BH05-C-1, HB-BH06-C-1, HB-BH06-C-2, HB-TP03-C-1, HB-TP03-C-3, HB-TP04-C-0.1, HB-TP04-C-3, HB-TP08-C-0.5, HB-TP09-C-1	17-Feb-2022	14-Feb-2022	**3**	----	----	----
EP075A: Phenolic Compounds						
Soil Glass Jar - Unpreserved						
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----
Soil Glass Jar - Unpreserved						
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	14-Feb-2022	**3**	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----
Soil Glass Jar - Unpreserved						
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	14-Feb-2022	**3**	----	----	----
EP075C: Phthalate Esters						
Soil Glass Jar - Unpreserved						
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----
Soil Glass Jar - Unpreserved						
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	14-Feb-2022	**3**	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP075D: Nitrosamines						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----
Soil Glass Jar - Unpreserved HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	14-Feb-2022	**3**	----	----	----
EP075E: Nitroaromatics and Ketones						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----
Soil Glass Jar - Unpreserved HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	14-Feb-2022	**3**	----	----	----
EP075F: Haloethers						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----
Soil Glass Jar - Unpreserved HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	17-Feb-2022	14-Feb-2022	**3**	----	----	----
EP075G: Chlorinated Hydrocarbons						
Soil Glass Jar - Unpreserved HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	17-Feb-2022	11-Feb-2022	**6**	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP075G: Chlorinated Hydrocarbons - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.5,	HB-TP02-C-1,	17-Feb-2022	11-Feb-2022	**6**	----	----	----
HB-TP05-C-1,	HB-TP06-C-0.1,						
HB-TP07-C-0.5							
Soil Glass Jar - Unpreserved							
HB-BH04-C-1.5,	HB-BH04-C-2,	17-Feb-2022	14-Feb-2022	**3**	----	----	----
HB-BH05-C-0.1,	HB-BH06-C-0.5,						
HB-TP03-C-0.1,	HB-TP04-C-0.5,						
QC02_310122,	HB-TP08-C-1,						
HB-TP09-C-0.1							
EP080/071: Total Petroleum Hydrocarbons							

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP080/071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.1,	QC001_280122,	17-Feb-2022	11-Feb-2022	**6**	17-Feb-2022	11-Feb-2022	**6**
HB-TP01-C-1,	HB-TP02-C-0.5,						
HB-TP02-C-2,	HB-TP05-C-0.5,						
HB-TP06-C-1,	HB-TP07-C-0.1						
Soil Glass Jar - Unpreserved							
HB-BH04-C-0.1,	HB-BH04-C-1.5,	17-Feb-2022	14-Feb-2022	**3**	17-Feb-2022	14-Feb-2022	**3**
HB-BH04-C-2,	HB-BH05-C-0.5,						
HB-BH05-C-1,	HB-BH06-C-1,						
HB-BH06-C-2,	HB-TP03-C-1,						
HB-TP03-C-3,	HB-TP04-C-0.1,						
HB-TP04-C-3,	HB-TP08-C-0.5,						
HB-TP09-C-1							
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.1,	QC001_280122,	17-Feb-2022	11-Feb-2022	**6**	17-Feb-2022	11-Feb-2022	**6**
HB-TP01-C-1,	HB-TP02-C-0.5,						
HB-TP02-C-2,	HB-TP05-C-0.5,						
HB-TP06-C-1,	HB-TP07-C-0.1						
Soil Glass Jar - Unpreserved							
HB-BH04-C-0.1,	HB-BH04-C-1.5,	17-Feb-2022	14-Feb-2022	**3**	17-Feb-2022	14-Feb-2022	**3**
HB-BH04-C-2,	HB-BH05-C-0.5,						
HB-BH05-C-1,	HB-BH06-C-1,						
HB-BH06-C-2,	HB-TP03-C-1,						
HB-TP03-C-3,	HB-TP04-C-0.1,						
HB-TP04-C-3,	HB-TP08-C-0.5,						
HB-TP09-C-1							
EP080: BTEXN							
Soil Glass Jar - Unpreserved							
HB-TP01-C-0.1,	QC001_280122,	17-Feb-2022	11-Feb-2022	**6**	17-Feb-2022	11-Feb-2022	**6**
HB-TP01-C-1,	HB-TP02-C-0.5,						
HB-TP02-C-2,	HB-TP05-C-0.5,						
HB-TP06-C-1,	HB-TP07-C-0.1						
Soil Glass Jar - Unpreserved							
HB-BH04-C-0.1,	HB-BH04-C-1.5,	17-Feb-2022	14-Feb-2022	**3**	17-Feb-2022	14-Feb-2022	**3**
HB-BH04-C-2,	HB-BH05-C-0.5,						
HB-BH05-C-1,	HB-BH06-C-1,						
HB-BH06-C-2,	HB-TP03-C-1,						
HB-TP03-C-3,	HB-TP04-C-0.1,						
HB-TP04-C-3,	HB-TP08-C-0.5,						
HB-TP09-C-1							

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002: pH 1:5 (Soils)							
Soil Glass Jar - Unpreserved (EA002)							
HB-TP01-C-0.1, HB-TP02-C-0.5, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	17-Feb-2022	✓
Soil Glass Jar - Unpreserved (EA002)							
HB-BH04-C-2, HB-BH05-C-1, HB-BH06-C-2, HB-TP03-C-3, HB-TP04-C-3, HB-TP08-C-3, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	17-Feb-2022	✓
EA003 :pH (field/fox)							
Snap Lock Bag - frozen (EA003)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**25-Feb-2022**	23-Oct-2024	✓	**25-Feb-2022**	26-May-2022	✓
Snap Lock Bag - frozen (EA003)							
HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**25-Feb-2022**	26-Oct-2024	✓	**25-Feb-2022**	26-May-2022	✓
EA010: Conductivity (1:5)							
Soil Glass Jar - Unpreserved (EA010)							
HB-TP01-C-0.1, HB-TP02-C-0.5, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	17-Mar-2022	✓
Soil Glass Jar - Unpreserved (EA010)							
HB-BH04-C-2, HB-BH05-C-1, HB-BH06-C-2, HB-TP03-C-3, HB-TP04-C-3, HB-TP08-C-3, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	17-Mar-2022	✓
EA029-A: pH Measurements							
Snap Lock Bag - frozen (EA029)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029)							
HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA029-B: Acidity Trail							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
EA029-C: Sulfur Trail							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
EA029-D: Calcium Values							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
EA029-E: Magnesium Values							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
EA029-F: Excess Acid Neutralising Capacity							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
EA029-G: Retained Acidity							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
EA029-H: Acid Base Accounting							
Snap Lock Bag - frozen (EA029) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP06-C-0.5	**28-Jan-2022**	**24-Feb-2022**	23-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓
Snap Lock Bag - frozen (EA029) HB-BH04-C-2, HB-TP03-C-2	**31-Jan-2022**	**24-Feb-2022**	26-Oct-2024	✓	**24-Feb-2022**	25-May-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
HB-TP01-C-0.1, QC001_280122, HB-TP01-C-0.5, HB-TP01-C-1, HB-TP02-C-0.5, HB-TP02-C-1, HB-TP02-C-2, HB-TP05-C-0.5, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP06-C-1, HB-TP07-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**----**	----	----	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EA055)							
HB-BH04-C-0.1, HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH05-C-0.5, HB-BH05-C-1, HB-BH06-C-0.5, HB-BH06-C-1, HB-BH06-C-2, HB-TP03-C-0.1, HB-TP03-C-1, HB-TP03-C-3, HB-TP04-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP04-C-3, HB-TP08-C-0.5, HB-TP08-C-1, HB-TP08-C-3, HB-TP09-C-0.1, HB-TP09-C-1	**31-Jan-2022**	**----**	----	----	**17-Feb-2022**	14-Feb-2022	×
EA150: Soil Classification based on Particle Size							
Snap Lock Bag (EA150H)							
HB-TP01-C-0.1	**28-Jan-2022**	**----**	----	----	**23-Feb-2022**	27-Jul-2022	✓
EA152: Soil Particle Density							
Snap Lock Bag (EA152)							
HB-TP01-C-0.1	**28-Jan-2022**	**----**	----	----	**23-Feb-2022**	27-Jul-2022	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200)							
HB-BH04-C-0.1, HB-BH04-C-1, HB-BH05-C-0.1, HB-BH05-C-1, HB-BH06-C-0.5, HB-BH06-C-2, HB-TP03-C-0.1, HB-TP03-C-0.5, HB-TP04-C-0.1, HB-TP04-C-1, HB-TP08-C-0.1, HB-TP09-C-0.1, QC003_310122	**31-Jan-2022**	**----**	----	----	**16-Feb-2022**	30-Jul-2022	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
HB-TP01-C-0.5, HB-TP02-C-0.1, HB-TP02-C-1, HB-TP05-C-0.1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP06-C-0.5	**28-Jan-2022**	**----**	----	----	**16-Feb-2022**	27-Jul-2022	✓
Soil Glass Jar - Unpreserved (EA200)							
HB-TP07-C-0.1, HB-TP07-C-1	**28-Jan-2022**	**----**	----	----	**16-Feb-2022**	27-Jul-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED006: Exchangeable Cations on Alkaline Soils							
Soil Glass Jar - Unpreserved (ED006)							
HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	25-Feb-2022	✓	**21-Feb-2022**	25-Feb-2022	✓
ED007: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED007)							
HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	25-Feb-2022	✓	**21-Feb-2022**	25-Feb-2022	✓
ED008: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED008)							
HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	25-Feb-2022	✓	**21-Feb-2022**	25-Feb-2022	✓
ED040S: Soluble Major Anions							
Soil Glass Jar - Unpreserved (ED040S)							
HB-TP01-C-0.1, HB-TP02-C-0.5, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	25-Feb-2022	✓	**18-Feb-2022**	17-Mar-2022	✓
Soil Glass Jar - Unpreserved (ED040S)							
HB-BH04-C-2, HB-BH05-C-1, HB-BH06-C-2, HB-TP03-C-3, HB-TP04-C-3, HB-TP08-C-3, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	28-Feb-2022	✓	**18-Feb-2022**	17-Mar-2022	✓
ED045G: Chloride by Discrete Analyser							
Soil Glass Jar - Unpreserved (ED045G)							
HB-TP01-C-0.1, HB-TP02-C-0.5, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	25-Feb-2022	✓	**18-Feb-2022**	17-Mar-2022	✓
Soil Glass Jar - Unpreserved (ED045G)							
HB-BH04-C-2, HB-BH05-C-1, HB-BH06-C-2, HB-TP03-C-3, HB-TP04-C-3, HB-TP08-C-3, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	28-Feb-2022	✓	**18-Feb-2022**	17-Mar-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
HB-TP01-C-0.1, QC001_280122, HB-TP01-C-1, HB-TP02-C-0.5, HB-TP02-C-2, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	27-Jul-2022	✓	**18-Feb-2022**	27-Jul-2022	✓
Soil Glass Jar - Unpreserved (EG005T)							
HB-BH04-C-0.1, HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.5, HB-BH05-C-1, HB-BH06-C-1, HB-BH06-C-2, HB-TP03-C-1, HB-TP03-C-3, HB-TP04-C-0.1, HB-TP04-C-3, HB-TP08-C-0.5, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	30-Jul-2022	✓	**18-Feb-2022**	30-Jul-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
HB-TP01-C-0.1, QC001_280122, HB-TP01-C-1, HB-TP02-C-0.5, HB-TP02-C-2, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	25-Feb-2022	✓	**18-Feb-2022**	25-Feb-2022	✓
Soil Glass Jar - Unpreserved (EG035T)							
HB-BH04-C-0.1, HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.5, HB-BH05-C-1, HB-BH06-C-1, HB-BH06-C-2, HB-TP03-C-1, HB-TP03-C-3, HB-TP04-C-0.1, HB-TP04-C-3, HB-TP08-C-0.5, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	28-Feb-2022	✓	**18-Feb-2022**	28-Feb-2022	✓
EK026SF: Total CN by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EK026SF)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**18-Feb-2022**	03-Mar-2022	✓
Soil Glass Jar - Unpreserved (EK026SF)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**18-Feb-2022**	03-Mar-2022	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP066)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP068) HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074) HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074) HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	04-Feb-2022	×	**17-Feb-2022**	04-Feb-2022	×
Soil Glass Jar - Unpreserved (EP074)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	07-Feb-2022	×	**17-Feb-2022**	07-Feb-2022	×
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
HB-TP01-C-0.1, QC001_280122, HB-TP01-C-1, HB-TP02-C-0.5, HB-TP02-C-2, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
HB-BH04-C-0.1, HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.5, HB-BH05-C-1, HB-BH06-C-1, HB-BH06-C-2, HB-TP03-C-1, HB-TP03-C-3, HB-TP04-C-0.1, HB-TP04-C-3, HB-TP08-C-0.5, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075F: Haloethers							
Soil Glass Jar - Unpreserved (EP075) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075) HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075) HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved (EP075) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075) HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved (EP075)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075)							
HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, QC02_310122, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) QC001_280122	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) QC001_280122	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP01-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP01-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP02-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP02-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP02-C-2	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP02-C-2	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP05-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP05-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP06-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP06-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH04-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH04-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH04-C-1.5	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH04-C-1.5	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH04-C-2	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH04-C-2	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons - Continued							
HB-BH05-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH05-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH06-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH06-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH06-C-2	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH06-C-2	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH05-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH05-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP03-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP03-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP03-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP03-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP04-C-0.1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP04-C-0.1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP04-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP04-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP08-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP08-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP09-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP09-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071) HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP01-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) QC001_280122	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) QC001_280122	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP01-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP01-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP02-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP02-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP02-C-2	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP02-C-2	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP05-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP05-C-0.5	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP06-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP06-C-1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH04-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH04-C-0.1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH04-C-1.5	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH04-C-1.5	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH04-C-2	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH04-C-2	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued							
HB-BH05-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH05-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH06-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH06-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH06-C-2	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH06-C-2	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH05-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH05-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP03-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP03-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP03-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP03-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP04-C-0.1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP04-C-0.1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP04-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP04-C-3	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP08-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP08-C-0.5	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-TP09-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-TP09-C-1	31-Jan-2022	17-Feb-2022	14-Feb-2022	×	17-Feb-2022	14-Feb-2022	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
HB-TP01-C-0.1, QC001_280122, HB-TP01-C-1, HB-TP02-C-0.5, HB-TP02-C-2, HB-TP05-C-0.5, HB-TP06-C-1, HB-TP07-C-0.1	**28-Jan-2022**	**17-Feb-2022**	11-Feb-2022	×	**17-Feb-2022**	11-Feb-2022	×
Soil Glass Jar - Unpreserved (EP080)							
HB-BH04-C-0.1, HB-BH04-C-1.5, HB-BH04-C-2, HB-BH05-C-0.5, HB-BH05-C-1, HB-BH06-C-1, HB-BH06-C-2, HB-TP03-C-1, HB-TP03-C-3, HB-TP04-C-0.1, HB-TP04-C-3, HB-TP08-C-0.5, HB-TP09-C-1	**31-Jan-2022**	**17-Feb-2022**	14-Feb-2022	×	**17-Feb-2022**	14-Feb-2022	×
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	27-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
HDPE Soil Jar (EP231X)							
HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	30-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	27-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
HDPE Soil Jar (EP231X)							
HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	30-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	27-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
HDPE Soil Jar (EP231X)							
HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	30-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	27-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
HDPE Soil Jar (EP231X) HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	30-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) HB-TP01-C-0.5, HB-TP02-C-1, HB-TP05-C-1, HB-TP06-C-0.1, HB-TP07-C-0.5	**28-Jan-2022**	**17-Feb-2022**	27-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓
HDPE Soil Jar (EP231X) HB-BH05-C-0.1, HB-BH06-C-0.5, HB-TP03-C-0.1, HB-TP04-C-0.5, HB-TP08-C-1, HB-TP09-C-0.1	**31-Jan-2022**	**17-Feb-2022**	30-Jul-2022	✓	**18-Feb-2022**	29-Mar-2022	✓

Matrix: **SOLID**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) HB-TP01-PACM, HB-TP02-C-PACM-0.9	**28-Jan-2022**	**----**	----	----	**16-Feb-2022**	27-Jul-2022	✓
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) HB-TP09-C-PACM	**31-Jan-2022**	**----**	----	----	**16-Feb-2022**	30-Jul-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Chloride Soluble By Discrete Analyser	ED045G	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	33	**12.12**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH field/fox	EA003	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	38	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	6	38	**15.79**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	21	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	21	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Chloride Soluble By Discrete Analyser	ED045G	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	33	**6.06**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
TRH Volatiles/BTEX	EP080	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Chloride Soluble By Discrete Analyser	ED045G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	33	**6.06**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride Soluble By Discrete Analyser	ED045G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	33	**6.06**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
pH field/fox	EA003	SOIL	In house: Referenced to Ahern et al 1998 - determined on a 1:5 soil/water extract designed to simulate field measured pH and pH after the extract has been oxidised with peroxide.
Electrical Conductivity (1:5)	EA010	SOIL	In house: Referenced to Rayment and Lyons 3A1 and APHA 2510. Conductivity is determined on soil samples using a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	SOIL	In house: Referenced to Ahern et al 2004 - a suspension peroxide oxidation method following the 'sulfur trail' by determining the level of 1M KCL extractable sulfur and the sulfur level after oxidation of soil sulphides. The 'acidity trail' is followed by measurement of TAA, TPA and TSA. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Resistivity (1:5)	EA080	SOIL	In house: Calculated from Electrical Conductivity
Particle Size Analysis by Hydrometer	EA150H	SOIL	Particle Size Analysis by Hydrometer according to AS1289.3.6.3
Soil Particle Density	EA152	SOIL	Soil Particle Density by AS 1289.3.5.1: Methods of testing soils for engineering purposes - Soil classification tests - Determination of the soil particle density of a soil - Standard method
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Exchangeable Cations on Alkaline Soils	* ED006	SOIL	In house: Referenced to Soil Survey Test Method C5. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with alcoholic ammonium chloride at pH 8.5. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil.
Exchangeable Cations	ED007	SOIL	In house: Referenced to Rayment & Lyons Method 15A1. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM Schedule B(3).
Exchangeable Cations with pre-treatment	ED008	SOIL	In house: Referenced to Rayment & Lyons Method 15A2. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM Schedule B(3).
Major Anions - Soluble	ED040S	SOIL	In house: Soluble Anions are determined off a 1:5 soil / water extract by ICPAES.
Chloride Soluble By Discrete Analyser	ED045G	SOIL	In house: Referenced to APHA 4500-Cl- E. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm. Analysis is performed on a 1:5 soil / water leachate.
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	In house: Referenced to APHA 4500-CN C / ASTM D7511 / ISO 14403. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM Schedule B(3).
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Semivolatile Organic Compounds	EP075	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Analytical Methods	Method	Matrix	Method Descriptions
Asbestos Identification in Bulk Solids	EA200	SOLID	In house: Referenced to AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
Exchangeable Cations Preparation Method (Alkaline Soils)	ED006PR	SOIL	In house: Referenced to Rayment and Lyons method 15C1.
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Lyons method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
Drying only	EN020D	SOIL	In house
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
1:5 solid / water leach following drying at 40°C	EN34-AD	SOIL	10 g of 40°C dried soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
QuECheRS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: JACOBS	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)
OFFICE: Melbourne			Custody Seal Intact? Yes No N/A
PROJECT: IS360318 PROJECT NO.:	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PURCHASE ORDER NO.:	COUNTRY OF ORIGIN:	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: CONTACT PH:		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: A U SAMPLER MOBILE: [redacted]			
COC Emailed to ALS? (YES) / NO EDD FORMAT (or default):			
Email Reports to: [redacted]			
Email Invoice to:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL ~~BOTTLES~~	S-3; S-7 (NEPM Suite, 15 Metals), (TRH (C6-C40) / BTEXN / PAH)	S-13; S-23; EP231 (OC / OP Pesticides / PCB); (VOC / SVOC); (PFAS – Short Suite (12 analytes))	CORR-7 (pH (1:5), Soluble Sulfate, Soluble Chloride)	P-22 (Fe, CEC, pH(CaCl2), TOC, Clay Content + pH(1:5), EC(1:5))	EN33 (TCLP (non-volatile))	EA003 (pHF and pHFOX)	EA200 (ACM presence absence)	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	HB-TP01-C-0.1	28/01/22	S	A, B, Soil Jar	2									
2	HB-TP01-C-0.5	28/01/22	S	B, Soil Jar	4									
3	HB-TP01-P.ACM	28/01/22	-	B	1									
4	HB-TP01-C-1	28/01/22	S	Soil Jar	2									
5	HB-TP02-C-0.1	28/01/22	S	B	1									
6	HB-TP02-C-0.5	28/01/22	S	Soil Jar	1									
7	HB-TP02-C-1	28/01/22	S	B, Soil Jar	4									
8	HB-TP02-C-2	28/01/22	S	Soil Jar	1									
9	HB-TP02-C-3	28/01/22	S	Soil Jar	1									
10	HB-TP02-C-PACM-0.9	28/01/22	-	B	1									
11	HB-TP03-C-01	31/01/22	S	B, Soil Jar	3									
12	HB-TP03-C-0.5	31/01/22	S	B, Jar	2									
				TOTAL	23									

Environmental Division
Melbourne
Work Order Reference
EM2202101

Telephone : +61-3-8549 9600

Received: 1/2 9:35 Carrier: TOLL
C/note:
Temp: 21.15 °C Seal: Y N
Ice / Icebricks / N/A

TM

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpreserved;DGP=Dust gauge Preserved

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: JACOBS	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):** Non Standard or urgent TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:			Custody Seal Intact? Yes No N/A
PROJECT: JS360316 **PROJECT NO.:**	**ALS QUOTE NO.:**		Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:**	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: **CONTACT PH:**			Other comment:
SAMPLER: **SAMPLER MOBILE:**			
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**			
Email Reports to:			
Email Invoice to:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-3; S-7 (NEPM Suite 15 Metals), (TRH (C6-C40) / BTEXN / PAH)	S-13; S-23; EP231 (OC / OP Pesticides / PCB); (VOC / SVOC); (PFAS – Short Suite (12 analytes))	CORR-7 (pH (1:5), Soluble Sulfate, Soluble Chloride)	P-22 (Fe, CEC, pH($CaCl_2$), TOC, Clay Content + pH(1:5), EC(1:5))	EN33 (TCLP (non-volatile))	EA003 (pHF and pHFOX)	EA200 (ACM presence absence)	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
13	HB-TP03-C-1	31/1/22	S	Soil Jar	2									
14	HB-TP03-C-2	31/1/22	S	B	1									
15	HB-TP03-C-3	31/1/22	S	Soil Jar	1									
16	HB-TP04-C-0.1	31/1/22	S	Soil Jar, B	2									
17	HB-TP04-C-0.5	31/1/22	S	"	2									
18	HB-TP04-C-1	31/1/22	S	Soil Jar, B	2									
19	HB-TP04-C-3	31/1/22	S	Soil Jar	1									
20	HB-TP05-C-0.1	28/1/22	S	Soil Jar, B	2									
21	HB-TP05-C-0.5	28/1/22	S	"	2									
22	HB-TP05-C-1	28/1/22	S	", B	3									
23	HB-TP06-C-0.1	28/1/22	S	", B	3									
24	HB-TP06-C-0.5	28/1/22	S	", B	3									
				TOTAL	24									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpresrerved;DGP=Dust gauge Preserved

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: JACOBS	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):** Non Standard or urgent TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:			Custody Seal Intact? Yes No N/A
PROJECT: IS360318 **PROJECT NO.:**	**ALS QUOTE NO.:**	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:**		Random Sample Temperature on Receipt: °C
PROJECT MANAGER: **CONTACT PH:**			Other comment:
SAMPLER: **SAMPLER MOBILE:**		**RELINQUISHED BY:**	**RECEIVED BY:**
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**			
Email Reports to:		DATE/TIME:	DATE/TIME:
Email Invoice to:		**RELINQUISHED BY:**	**RECEIVED BY:**
		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	W-23: Corr. Schedule 1 (VOC / SVOC)	NT-1; NT-1T (Cations: Major (Ca, Mg, Na, K)); Total Cations: Major (Ca, Mg, Na, K)	W-3; NT-6 (NEPM Suite: 15 Metals); (Total Nitrogen, TKN, NO_x, NO_2, NO_3)	EA080; EP231 (Resistivity); (PFAS 12 suite)	EK025; EK026; EK085; ED041 (Cyanide free and total); Sulfide, Sulfite)	W-18 (TRH, BTEXN) - TRIP BLANK	W-3; W-7 (BTEX, TRH, PAH); (15 metals) - RINSATE	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
×37	HB-TP08-C-3	31/1/22	S	Jar	1									
×38	HB-TP09-C-0.1	31/1/22	S	~~Jar~~ Jar, B	~~2~~ 3									
×39	HB-TP09-C-0.5	31/1/22	S	Jar	1									
×40	HB-TP09-C-~~0.5~~1	31/1/22	S	Jar	1									
×41	HB-TP09-C-PAH	31/1/22	—	B	1									
×42	HB-BH06-C-0.5	31/1/22	S	B, Jar	3									
×43	HB-BH06-C-1	"	S	Jar	1									
×44	HB-BH06-C-2	"	S	Jar, B	2									
×45	HB-BH05-C-0.1	"	S	J, B	3									
×46	HB-BH05-C-0.5	"	S	J	1									
×47	HB-BH05-C-1	"	S	J, B	2									
×48	HB-BH04-C-0.1	"	S	J, B	2									
				TOTAL	22									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpresrerved;DGP=Dust gauge Preserved

CHAIN OF CUSTODY

ALS Laboratory: **please tick** →

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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: JACOBS	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):** Non Standard or urgent TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:			Custody Seal Intact? Yes No N/A
PROJECT: IS360318 **PROJECT NO.:**	**ALS QUOTE NO.:**	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:**	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: **CONTACT PH:**		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: **SAMPLER MOBILE:**			
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**			
Email Reports to:			
Email Invoice to:			

RELINQUISHED BY:	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-3; S-7 (NEPM Suite, 15 Metals), (TRH (C6-C40) / BTEXN / PAH)	S-13; S-23; EP231 (OC / OP Pesticides / PCB); (VOC / SVOC); (PFAS – Short Suite (12 analytes))	CORR-7 (pH (1:5), Soluble Sulfate, Soluble Chloride)	P-22 (Fe, CEC, pH($CaCl_2$), TOC, Clay Content + pH(1:5), EC(1:5))	EN33 (TCLP (non-volatile))	EA003 (pHF and pHFOX)	EA200 (ACM presence absence)	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
25	HB-TP06-C-1	28/01/22	S	Jar	1									
26	HB-TP06-C-2	28/01/22	S	Jar	1									
27	HB-TP06-C-3	28/01/22	S	Jar	1									
28	HB-TP07-C-0.1	28/01/22	S	Jar, B	3									
29	HB-TP07-C-0.5	28/01/22	S	Jar	2									
30	HB-TP07-C-1	28/01/22	S	Jar, B	2									
31	HB-TP07-C-2	28/01/22	S	Jar	1									
32	HB-TP07-C-3	28/01/22	S	Jar	1									
33	HB-TP08-C-0.1	31/01/22	S	Jar, B	2									
34	HB-TP08-C-0.5	31/01/22	S	Jar	1									
35	HB-TP08-C-1	31/01/22	S	Jar	2									
36	HB-TP08-C-2	31/01/22	S	Jar	1									
				TOTAL	18									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpresrerved;DGP=Dust gauge Preserved

CHAIN OF CUSTODY

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WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: JACOBS	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):** Non Standard or urgent TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:			Custody Seal Intact? Yes No N/A
PROJECT: JS360318 **PROJECT NO.:**	**ALS QUOTE NO.:**	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:**	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: **CONTACT PH:**		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: **SAMPLER MOBILE:**			
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**			
Email Reports to:			
Email Invoice to:			

RELINQUISHED BY:	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	W-23: Corr. Schedule 1 (VOC / SVOC)	NT-1: NT-1T (Cations: Major (Ca, Mg, Na, K); Total Cations: Major (Ca, Mg, Na, K)	W-3: NT-6 (NEPM Suite: 15 Metals); (Total Nitrogen, TKN, NO_x, NO_2, NO_3)	EA080: EP231 (Resistivity); (PFAS 12 suite)	EK025; EK026; EK085; ED041 (Cyanide free and total); Sulfide, Sulfite)	W-18 (TRH; BTEXN) - TRIP BLANK	W-3; W-7 (BTEX, TRH, PAH); (15 metals) - RINSATE	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
49	HB-BH04-C-~~0.5~~ 1	31/01/22	S	Jar, B	2									
50	HB-BH04-C-1.5	31/01/22	S	J	1									
51	HB-BH04-C-2	31/01/22	S	J, B	2									
52	QC101_280122	28/01/22	S	J	1									
53	QC201_280122	28/01/22	S	J	1									
54	QC02_310122	31/01/22	S	J	1									
55	QC202_31022	31/01/22	S	J	1									
56	QC03_31022	31/01/22	S	J, B	3									
57	QC103_31022	31/01/22	S	J, B	3									
10														
11														
12														
				TOTAL	15									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpresrerved;DGP=Dust gauge Preserved

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Jacobs	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	✻ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)
OFFICE: Melbourne			Custody Seal Intact? Yes No N/A
PROJECT: Heybridge PROJECT NO: IS360318	ALS QUOTE NO.: ME/030/22	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PURCHASE ORDER NO.: TBC	COUNTRY OF ORIGIN:	OF: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: C
PROJECT MANAGER: AV CONTACT PH:			Other comment:
SAMPLER: AV SAMPLER MOBILE: 0412026490	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC Emailed to ALS? (YES / NO) EDD FORMAT (or default):			
Email Reports to: antony.volcich@jacobs.com; michael.stacey@jacobs.com	DATE/TIME:	DATE/TIME:	DATE/TIME: / DATE/TIME:
Email Invoice to: antony.volcich@jacobs.com; michael.stacey@jacobs.com			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS Matrix: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required)								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	metals (As, B, Ba, Be, Cd, Cr, Co, Cu, Mn, Al, Pb, Sb, Ti, V, Zn, Hg) and hydrocarbon compounds (TRH, BTEX, PAH)	pH, chloride, sulfate, electrical conductivity and reactivity 1	total cyanide, [VOCs4], (SVOCs), [PFAS], (OCP), e (PCB) and total phenols	pH, cation exchange capacity and %clay	leachate (TCLP/ASLP) metals, (PAH), OCP, PCB, total phenol and total cyanide	laboratory pH and emicrosil pH, SPOCAS	asbestos	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	1	HB-BH04-C-0.1	31/01/2022	Soil			X						X	
2	2	HB-BH04-C-1	31/01/2022	Soil									X	
3	3	HB-BH04-C-1.5	31/01/2022	Soil			X		X			X		
4	4	HB-BH04-C-2	31/01/2022	Soil			X	X	X			X		
5	5	HB-BH05-C-0.1	31/01/2022	Soil					X				X	
6	6	HB-BH05-C-0.5	31/01/2022	Soil			X				X			
7	7	HB-BH05-C-1	31/01/2022	Soil			X	X					X	
8	8	HB-BH08-C-0.5	31/01/2022	Soil					X				X	
9	9	HB-BH08-C-1	31/01/2022	Soil			X							
10	10	HB-BH08-C-2	31/01/2022	Soil			X	X					X	
11	11	HB-TP01-C-0.1	28/01/2022	Soil			X	X		X			X	
[redacted]	QC101_280122	28/01/2022	Soil	Send to Eurofins										
12	13	QC001_280122	28/01/2022	Soil			X							
13	14	HB-TP01-C-0.5	28/01/2022	Soil					X			X	X	
14	15	HB-TP01-C-1	28/01/2022	Soil			X				X			
15	16	HB-TP01-PACM	28/01/2022	ACM									X	
16	17	HB-TP02-C-0.1	28/01/2022	Soil									X	
17	18	HB-TP02-C-0.5	28/01/2022	Soil			X	X						
18	19	HB-TP02-C-1	28/01/2022	Soil					X			X	X	
19	20	HB-TP02-C-2	28/01/2022	Soil			X							
20	21	HB-TP02-C-3	28/01/2022	Soil										X
21	22	HB-TP02-C-PACM-0.9	28/01/2022	ACM									X	
22	23	HB-TP03-C-0.1	31/01/2022	Soil					X				X	
23	24	HB-TP03-C-0.5	31/01/2022	Soil									X	
24	25	HB-TP03-C-1	31/01/2022	Soil			X				X			
25	26	HB-TP03-C-2	31/01/2022	Soil								X		
26	27	HB-TP03-C-3	31/01/2022	Soil			X	X						
27	28	HB-TP04-C-0.1	31/01/2022	Soil			X						X	
28	29	HB-TP04-C-0.5	31/01/2022	Soil					X					
[redacted]	QC102_310122	31/01/2022	Soil	Send to Eurofins										
29	31	QC02_310122	31/01/2022	Soil					X					
30	32	HB-TP04-C-1	31/01/2022	Soil								X	X	
31	33	HB-TP04-C-3	31/01/2022	Soil			X	X						
32	34	HB-TP05-C-0.1	28/01/2022	Soil									X	
33	35	HB-TP05-C-0.5	28/01/2022	Soil			X	X			X			
34	36	HB-TP05-C-1	28/01/2022	Soil					X				X	
35	37	HB-TP06-C-0.1	28/01/2022	Soil					X				X	
36	38	HB-TP06-C-0.5	28/01/2022	Soil								X	X	
37	39	HB-TP06-C-1	28/01/2022	Soil			X	X						
38	40	HB-TP06-C-2	28/01/2022	Soil										X
39	41	HB-TP06-C-3	28/01/2022	Soil										X
40	42	HB-TP07-C-0.1	28/01/2022	Soil			X	X			X		X	
41	43	HB-TP07-C-0.5	28/01/2022	Soil					X					
42	44	HB-TP07-C-1	28/01/2022	Soil									X	
43	45	HB-TP07-C-2	28/01/2022	Soil										X
44	46	HB-TP07-C-3	28/01/2022	Soil										X
45	47	HB-TP08-C-0.1	31/01/2022	Soil									X	
46	48	HB-TP08-C-0.5	31/01/2022	Soil			X						X	
47	49	HB-TP08-C-1	31/01/2022	Soil					X					
48	50	HB-TP08-C-2	31/01/2022	Soil								X		
49	51	HB-TP08-C-3	31/01/2022	Soil				X						
50	52	HB-TP09-C-0.1	31/01/2022	Soil					X			X	X	
[redacted]	QC103_310122	31/01/2022	Soil	Send to Eurofins										
51	54	QC003_310122	31/01/2022	Soil									X	
52	55	HB-TP09-C-0.5	31/01/2022	Soil										X
53	56	HB-TP09-C-1	31/01/2022	Soil			X	X						
54	57	HB-TP09-C-PACM	31/01/2022	ACM									X	
				TOTAL										

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; U = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. Air Container Codes: DGU = Dust Gauge Unpreserved; DGP = Dust gauge Preserved

Extra 55: TRIP BLANK.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2202619**	Page	: 1 of 47
Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	[redacted]
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS360318	Date Samples Received	: 17-Feb-2022 10:08
Order number	: ----	Date Analysis Commenced	: 19-Feb-2022
C-O-C number	: ----	Issue Date	: 25-Feb-2022 17:48
Sampler	: AV		
Site	: ----		
Quote number	: ME/030/22		
No. of samples received	: 19		
No. of samples analysed	: 18		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X: Poor matrix spike recovery for sample EM2202595-048 due to sample matrix interference.
- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP075: Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EA015H: EM2202619 #1-2, #4: TDS by method EA-015 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Sample 005 was filtered through a 0.45um filter prior to the dissolved metals analysis.
- EK085: EM2202619#2 Poor matrix spike recovery for sulphide due to sample matrix. Confirmed by re-extraction and re-analysis.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs

- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)				Sample ID	HB-BH01-C-0.1	----	----	----	----
				Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2202619-006	--------	--------	--------	--------
					Result	----	----	----	----
EG005(ED093)C: Leachable Metals by ICPAES									
Arsenic	7440-38-2	0.1	mg/L		<0.1	----	----	----	----
Barium	7440-39-3	0.1	mg/L		<0.1	----	----	----	----
Beryllium	7440-41-7	0.05	mg/L		<0.05	----	----	----	----
Boron	7440-42-8	0.1	mg/L		<0.1	----	----	----	----
Cadmium	7440-43-9	0.05	mg/L		<0.05	----	----	----	----
Chromium	7440-47-3	0.1	mg/L		<0.1	----	----	----	----
Cobalt	7440-48-4	0.1	mg/L		<0.1	----	----	----	----
Copper	7440-50-8	0.1	mg/L		<0.1	----	----	----	----
Lead	7439-92-1	0.1	mg/L		<0.1	----	----	----	----
Manganese	7439-96-5	0.1	mg/L		**0.9**	----	----	----	----
Nickel	7440-02-0	0.1	mg/L		<0.1	----	----	----	----
Selenium	7782-49-2	0.05	mg/L		<0.05	----	----	----	----
Titanium	7440-32-6	0.1	mg/L		<0.1	----	----	----	----
Vanadium	7440-62-2	0.1	mg/L		<0.1	----	----	----	----
Zinc	7440-66-6	0.1	mg/L		**0.2**	----	----	----	----
EG035C: Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0010	mg/L		<0.0010	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
^ **Total Polychlorinated biphenyls**	----	1	µg/L		<1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	µg/L		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	µg/L		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	µg/L		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	µg/L		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	µg/L		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L		<0.5	----	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L		<0.5	----	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	µg/L		<0.5	----	----	----	----
Endrin	72-20-8	0.5	µg/L		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)				Sample ID	HB-BH01-C-0.1	----	----	----	----
				Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2202619-006	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
beta-Endosulfan	33213-65-9	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L		<0.5	----	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDT	50-29-3	2.0	µg/L		<2.0	----	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L		<0.5	----	----	----	----
Methoxychlor	72-43-5	2.0	µg/L		<2.0	----	----	----	----
^ Total Chlordane (sum)	----	0.5	µg/L		<0.5	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L		<0.5	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L		<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		<1.0	----	----	----	----
2-Chlorophenol	95-57-8	1.0	µg/L		<1.0	----	----	----	----
2-Methylphenol	95-48-7	1.0	µg/L		<1.0	----	----	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		<2.0	----	----	----	----
2-Nitrophenol	88-75-5	1.0	µg/L		<1.0	----	----	----	----
2.4-Dimethylphenol	105-67-9	1.0	µg/L		<1.0	----	----	----	----
2.4-Dichlorophenol	120-83-2	1.0	µg/L		<1.0	----	----	----	----
2.6-Dichlorophenol	87-65-0	1.0	µg/L		<1.0	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		<1.0	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	----	----	----	----
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L		<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L		<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L		<1.0	----	----	----	----

Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)				Sample ID	HB-BH01-C-0.1	----	----	----	----
				Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2202619-006	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	µg/L		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	µg/L		<0.5	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	1	%		**82.3**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.5	%		**86.1**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.5	%		**97.4**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**28.8**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**71.9**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**88.8**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**87.0**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**82.4**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**82.8**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	----	3.8	----	----	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	20	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	10.9	----	----	----
Moisture Content	----	1.0	%	14.4	----	19.0	----	----
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	----	50000	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	----	No	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	----	No	----
Asbestos Type	1332-21-4	-	--	-	-	----	-	----
Sample weight (dry)	----	0.01	g	42.7	27.5	----	56.3	----
APPROVED IDENTIFIER:	----	-	--	U.DALKIN	U.DALKIN	----	U.DALKIN	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	----	No	----
Organic Fibre	----	0.1	g/kg	No	No	----	No	----
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	----	<50	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	----	<10	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	<5	----	----
Barium	7440-39-3	10	mg/kg	10	----	10	----	----
Beryllium	7440-41-7	1	mg/kg	<1	----	<1	----	----
Boron	7440-42-8	50	mg/kg	<50	----	<50	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	----	----
Chromium	7440-47-3	2	mg/kg	9	----	2	----	----
Cobalt	7440-48-4	2	mg/kg	16	----	<2	----	----
Copper	7440-50-8	5	mg/kg	23	----	<5	----	----
Lead	7439-92-1	5	mg/kg	12	----	<5	----	----
Manganese	7439-96-5	5	mg/kg	318	----	21	----	----
Nickel	7440-02-0	2	mg/kg	84	----	<2	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	<5	----	----
Vanadium	7440-62-2	5	mg/kg	10	----	<5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Zinc	7440-66-6	5	mg/kg	**41**	----	<5	----	----
Titanium	7440-32-6	10	mg/kg	**620**	----	**10**	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	<1	----	----	----
EN33: TCLP Leach - Inorganics/Non-Volatile Organics (Glass Vessel)								
Initial pH	----	0.1	pH Unit	----	----	----	----	**9.4**
After HCl pH	----	0.1	pH Unit	----	----	----	----	**1.9**
Extraction Fluid Number	----	1	-	----	----	----	----	**5**
Final pH	----	0.1	pH Unit	----	----	----	----	**5.0**
EN33Z: ZHE TCLP Leach								
Extraction Fluid Number	----	0.1	pH Unit	----	----	----	----	**1.0**
EN60: ASLP Leaching Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)								
Initial pH	----	0.1	pH Unit	**9.7**	----	----	----	----
After HCl pH	----	0.1	pH Unit	**1.1**	----	----	----	----
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	----	----	----	----
Final pH	----	0.1	pH Unit	**5.1**	----	----	----	----
EN60Z: ASLP Leachate - ZHE								
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg	----	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
				Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
					Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
tert-Butylbenzene	98-06-6	0.5	mg/kg		----	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		----	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		----	<0.5	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		----	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		----	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		----	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		----	<5	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		----	<0.5	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		----	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		----	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		----	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		----	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg		----	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg		----	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg		----	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg		----	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		----	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg		----	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg		----	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		----	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		----	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		----	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		----	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		----	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		----	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		----	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	<0.5	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg	----	<0.5	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
				Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	**1.2**	----	----
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		----	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg		----	<0.5	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		----	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		----	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		----	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		----	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		----	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		----	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		----	<0.5	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg		----	<1	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	<0.5	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg		----	<0.5	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg		----	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		----	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg		----	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg		----	<0.5	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg		----	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
				Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
					Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Chrysene	218-01-9	0.5	mg/kg		----	<0.5	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		----	<1	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		----	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg		----	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	<0.5	----	----	----
^ Sum of PAHs	----	0.5	mg/kg		----	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	**1.2**	----	----	----
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg		----	<0.5	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg		----	<0.5	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg		----	<0.5	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg		----	<0.5	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg		----	<5.0	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg		----	<0.5	----	----	----
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg		----	<1.0	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		----	<1.0	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg		----	<0.5	----	----	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		----	<0.5	----	----	----
Acetophenone	98-86-2	0.5	mg/kg		----	<0.5	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg		----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued								
Isophorone	78-59-1	0.5	mg/kg	----	<0.5	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	----	<1.0	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	----	<1.0	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg	----	<0.5	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	----	<0.5	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	----	<0.5	----	----	----
Azobenzene	103-33-3	1	mg/kg	----	<1	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	----	<0.5	----	----	----
Phenacetin	62-44-2	0.5	mg/kg	----	<0.5	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	----	<0.5	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	----	<0.5	----	----	----
Pronamide	23950-58-5	0.5	mg/kg	----	<0.5	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	----	<0.5	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg	----	<0.5	----	----	----
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	----	<0.5	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	----	<0.5	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	----	<0.5	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	----	<0.5	----	----	----
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	<0.5	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg	----	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	<0.5	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	----	<2.5	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	----	<1.0	----	----	----
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	----	<0.5	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg	----	<0.5	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	----	<1.0	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EP075H: Anilines and Benzidines - Continued								
3-Nitroaniline	99-09-2	1.0	mg/kg	----	<1.0	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	----	<0.5	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	----	<0.5	----	----	----
Carbazole	86-74-8	0.5	mg/kg	----	<0.5	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	<0.5	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	<0.5	----	----	----
beta-BHC	319-85-7	0.5	mg/kg	----	<0.5	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg	----	<0.5	----	----	----
delta-BHC	319-86-8	0.5	mg/kg	----	<0.5	----	----	----
Heptachlor	76-44-8	0.5	mg/kg	----	<0.5	----	----	----
Aldrin	309-00-2	0.5	mg/kg	----	<0.5	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	<0.5	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	----	<0.5	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	----	<0.5	----	----	----
Endrin	72-20-8	0.5	mg/kg	----	<0.5	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	----	<0.5	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	----	<1.0	----	----	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	<0.5	----	----	----
Dimethoate	60-51-5	0.5	mg/kg	----	<0.5	----	----	----
Diazinon	333-41-5	0.5	mg/kg	----	<0.5	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	<0.5	----	----	----
Malathion	121-75-5	0.5	mg/kg	----	<0.5	----	----	----
Fenthion	55-38-9	0.5	mg/kg	----	<0.5	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg	----	<0.5	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg	----	<0.5	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg	----	<0.5	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg	----	<0.5	----	----	----
Ethion	563-12-2	0.5	mg/kg	----	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	**240**	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	**810**	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**1050**	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	**700**	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	**1210**	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**1910**	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
			Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
				Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	<0.0005	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	<0.0002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	<0.0002	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	<0.0002	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	**106**	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	**93.4**	----	----	----
Toluene-D8	2037-26-5	0.5	%		----	**97.2**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		----	**104**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**75.8**	----	**95.2**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**73.3**	----	**90.6**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**61.4**	----	**69.5**	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**77.3**	----	**97.0**	----	----
Anthracene-d10	1719-06-8	0.5	%		**106**	----	**107**	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**85.1**	----	**92.5**	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		----	**117**	----	----	----
Phenol-d6	13127-88-3	0.5	%		----	**93.9**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	**92.4**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	**88.8**	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		----	**94.3**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	HB-BH01-C-0.1	HB-BH01-C-0.5	HB-BH01-C-2	QC01	HB-BH01-C-0.1
				Sampling date / time	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00	04-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-006	EM2202619-007	EM2202619-008	EM2202619-019	EM2202619-021
					Result	Result	Result	Result	Result
EP075T: Base/Neutral Extractable Surrogates - Continued									
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		----	84.9	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		----	90.2	----	----	----
Anthracene-d10	1719-06-8	0.5	%		----	94.8	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	102	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		80.2	----	88.4	----	----
Toluene-D8	2037-26-5	0.2	%		79.1	----	92.0	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		85.7	----	100	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	114	----	----	----
13C8-PFOA	----	0.0002	%		----	115	----	----	----

Analytical Results

Sub-Matrix: TCLP LEACHATE (Matrix: WATER)				Sample ID	HB-BH01-C-0.1	----	----	----	----
				Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2202619-021	--------	--------	--------	--------
					Result	----	----	----	----
EG005(ED093)C: Leachable Metals by ICPAES									
Arsenic	7440-38-2	0.1	mg/L		<0.1	----	----	----	----
Barium	7440-39-3	0.1	mg/L		<0.1	----	----	----	----
Beryllium	7440-41-7	0.05	mg/L		<0.05	----	----	----	----
Boron	7440-42-8	0.1	mg/L		<0.1	----	----	----	----
Cadmium	7440-43-9	0.05	mg/L		<0.05	----	----	----	----
Chromium	7440-47-3	0.1	mg/L		<0.1	----	----	----	----
Cobalt	7440-48-4	0.1	mg/L		<0.1	----	----	----	----
Copper	7440-50-8	0.1	mg/L		<0.1	----	----	----	----
Lead	7439-92-1	0.1	mg/L		<0.1	----	----	----	----
Manganese	7439-96-5	0.1	mg/L		**0.9**	----	----	----	----
Nickel	7440-02-0	0.1	mg/L		<0.1	----	----	----	----
Selenium	7782-49-2	0.05	mg/L		<0.05	----	----	----	----
Titanium	7440-32-6	0.1	mg/L		<0.1	----	----	----	----
Vanadium	7440-62-2	0.1	mg/L		<0.1	----	----	----	----
Zinc	7440-66-6	0.1	mg/L		**0.4**	----	----	----	----
EG035C: Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0010	mg/L		<0.0010	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.004	mg/L		<0.004	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
^ **Total Polychlorinated biphenyls**	----	1	µg/L		<1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	µg/L		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	µg/L		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	µg/L		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	µg/L		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	µg/L		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L		<0.5	----	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L		<0.5	----	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	µg/L		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: TCLP LEACHATE (Matrix: WATER)				Sample ID	HB-BH01-C-0.1	----	----	----	----
				Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2202619-021	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDE	72-55-9	0.5	µg/L		<0.5	----	----	----	----
Endrin	72-20-8	0.5	µg/L		<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L		<0.5	----	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDT	50-29-3	2.0	µg/L		<2.0	----	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L		<0.5	----	----	----	----
Methoxychlor	72-43-5	2.0	µg/L		<2.0	----	----	----	----
^ Total Chlordane (sum)	----	0.5	µg/L		<0.5	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L		<0.5	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L		<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		<1.0	----	----	----	----
2-Chlorophenol	95-57-8	1.0	µg/L		<1.0	----	----	----	----
2-Methylphenol	95-48-7	1.0	µg/L		<1.0	----	----	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		<2.0	----	----	----	----
2-Nitrophenol	88-75-5	1.0	µg/L		<1.0	----	----	----	----
2.4-Dimethylphenol	105-67-9	1.0	µg/L		<1.0	----	----	----	----
2.4-Dichlorophenol	120-83-2	1.0	µg/L		<1.0	----	----	----	----
2.6-Dichlorophenol	87-65-0	1.0	µg/L		<1.0	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		<1.0	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	----	----	----	----
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L		<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L		<1.0	----	----	----	----

Analytical Results

Sub-Matrix: TCLP LEACHATE (Matrix: WATER)				Sample ID	HB-BH01-C-0.1	----	----	----	----
				Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2202619-021	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	1	%		**85.3**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.5	%		**88.2**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.5	%		**100.0**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**32.9**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**76.6**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**95.9**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**94.0**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**85.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**86.0**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
			Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
				Result	Result	Result	Result	Result
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**1610**	**882**	**371**	**367**	**----**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**1400**	**736**	**264**	**303**	**----**
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	**621**	**1130**	**2700**	**2720**	**----**
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.026**	**0.007**	<0.001	**0.002**	<0.001
Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	**0.05**
Barium	7440-39-3	0.001	mg/L	**0.054**	**0.008**	**0.007**	**0.025**	**0.016**
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	7440-48-4	0.001	mg/L	**0.018**	**0.005**	**0.013**	**0.013**	**0.002**
Chromium	7440-47-3	0.001	mg/L	**0.005**	**0.004**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	**0.008**	<0.001	**0.005**	**0.003**
Manganese	7439-96-5	0.001	mg/L	**0.494**	**0.130**	**0.231**	**0.061**	**0.229**
Nickel	7440-02-0	0.001	mg/L	**0.020**	**0.007**	**0.007**	**0.007**	**0.004**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.050**	**0.034**	**0.022**	**0.057**	**0.048**
Titanium	7440-32-6	0.01	mg/L	<0.01	**0.02**	<0.01	<0.01	<0.01
Iron	7439-89-6	0.05	mg/L	**150**	**2.13**	**7.72**	**7.39**	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025SF: Free CN by Segmented Flow Analyser								
Free Cyanide	----	0.004	mg/L	<0.004	<0.004	<0.004	<0.004	**----**
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	0.004	mg/L	<0.004	<0.004	<0.004	<0.004	**----**
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.54**	**0.08**	<0.01	<0.01	<0.01
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	**0.02**	<0.01	<0.01	**----**
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	**0.07**	**0.02**	<0.01	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	**0.09**	**0.02**	<0.01	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**2.2**	**0.6**	**0.1**	**0.4**	**0.7**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**2.2**	**0.7**	**0.1**	**0.4**	**0.7**
EK085M: Sulfide as S2-									
Sulfide as S2-	18496-25-8	0.1	mg/L		<0.1	<0.1	<0.1	<0.1	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	1	µg/L		<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L		<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L		<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<2	<2	<2	<2
Styrene	100-42-5	5	µg/L		<5	<5	<5	<5	<5
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	<2
Isopropylbenzene	98-82-8	5	µg/L		<5	<5	<5	<5	<5
n-Propylbenzene	103-65-1	5	µg/L		<5	<5	<5	<5	<5
1.3.5-Trimethylbenzene	108-67-8	5	µg/L		<5	<5	<5	<5	<5
sec-Butylbenzene	135-98-8	5	µg/L		<5	<5	<5	<5	<5
1.2.4-Trimethylbenzene	95-63-6	5	µg/L		<5	<5	<5	<5	<5
tert-Butylbenzene	98-06-6	5	µg/L		<5	<5	<5	<5	<5
p-Isopropyltoluene	99-87-6	5	µg/L		<5	<5	<5	<5	<5
n-Butylbenzene	104-51-8	5	µg/L		<5	<5	<5	<5	<5
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	50	µg/L		<50	<50	<50	<50	<50
2-Butanone (MEK)	78-93-3	50	µg/L		<50	<50	<50	<50	<50
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L		<50	<50	<50	<50	<50
2-Hexanone (MBK)	591-78-6	50	µg/L		<50	<50	<50	<50	<50
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	5	µg/L		<5	<5	<5	<5	<5
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<5	<5	<5	<5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
			Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	<5	<5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	<50	<50
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	<50	<50
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	<50	<50
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	<50	<50
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	<50	<50
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	<50	<50
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	<5	<5
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	<5	<5
1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	<5	<5
1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	<5	<5
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	<5	<5
1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	<5	<5
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	<5	<5
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	<5	<5
1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	<5	<5
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	<5	<5	<5
Pentachloroethane	76-01-7	5	µg/L	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	<5	<5	<5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	5	µg/L	<5	<5	<5	<5	<5
Bromobenzene	108-86-1	5	µg/L	<5	<5	<5	<5	<5
2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	<5	<5	<5
4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	<5	<5	<5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued									
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	<5	<5
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		**6**	**13**	<5	<5	<5
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	<5	<5
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	<5	<5
Bromoform	75-25-2	5	µg/L		<5	<5	<5	<5	<5
EP075A: Phenolic Compounds									
Phenol	108-95-2	2	µg/L		<2	<2	<2	<2	<2
2-Chlorophenol	95-57-8	2	µg/L		<2	<2	<2	<2	<2
2-Methylphenol	95-48-7	2	µg/L		<2	<2	<2	<2	<2
3- & 4-Methylphenol	1319-77-3	4	µg/L		<4	<4	<4	<4	<4
2-Nitrophenol	88-75-5	2	µg/L		<2	<2	<2	<2	<2
2.4-Dimethylphenol	105-67-9	2	µg/L		<2	<2	<2	<2	<2
2.4-Dichlorophenol	120-83-2	2	µg/L		<2	<2	<2	<2	<2
2.6-Dichlorophenol	87-65-0	2	µg/L		<2	<2	<2	<2	<2
4-Chloro-3-methylphenol	59-50-7	2	µg/L		<2	<2	<2	<2	<2
2.4.6-Trichlorophenol	88-06-2	2	µg/L		<2	<2	<2	<2	<2
2.4.5-Trichlorophenol	95-95-4	2	µg/L		<2	<2	<2	<2	<2
Pentachlorophenol	87-86-5	4	µg/L		<4	<4	<4	<4	<4
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	2	µg/L		<2	<2	<2	<2	<2
2-Methylnaphthalene	91-57-6	2	µg/L		<2	<2	<2	<2	<2
2-Chloronaphthalene	91-58-7	2	µg/L		<2	<2	<2	<2	<2
Acenaphthylene	208-96-8	2	µg/L		<2	<2	<2	<2	<2
Acenaphthene	83-32-9	2	µg/L		<2	<2	<2	<2	<2
Fluorene	86-73-7	2	µg/L		<2	<2	<2	<2	<2
Phenanthrene	85-01-8	2	µg/L		<2	<2	<2	<2	<2
Anthracene	120-12-7	2	µg/L		<2	<2	<2	<2	<2
Fluoranthene	206-44-0	2	µg/L		<2	<2	<2	<2	<2
Pyrene	129-00-0	2	µg/L		<2	<2	<2	<2	<2
N-2-Fluorenyl Acetamide	53-96-3	2	µg/L		<2	<2	<2	<2	<2
Benz(a)anthracene	56-55-3	2	µg/L		<2	<2	<2	<2	<2
Chrysene	218-01-9	2	µg/L		<2	<2	<2	<2	<2

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L		<4	<4	<4	<4	<4
7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L		<2	<2	<2	<2	<2
Benzo(a)pyrene	50-32-8	2	µg/L		<2	<2	<2	<2	<2
3-Methylcholanthrene	56-49-5	2	µg/L		<2	<2	<2	<2	<2
Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L		<2	<2	<2	<2	<2
Dibenz(a.h)anthracene	53-70-3	2	µg/L		<2	<2	<2	<2	<2
Benzo(g.h.i)perylene	191-24-2	2	µg/L		<2	<2	<2	<2	<2
^ Sum of PAHs	----	2	µg/L		<2	<2	<2	<2	<2
^ Benzo(a)pyrene TEQ (zero)	----	2	µg/L		<2	<2	<2	<2	<2
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	2	µg/L		<2	<2	<2	<2	<2
Diethyl phthalate	84-66-2	2	µg/L		<2	<2	<2	<2	<2
Di-n-butyl phthalate	84-74-2	2	µg/L		<2	<2	<2	<2	<2
Butyl benzyl phthalate	85-68-7	2	µg/L		<2	<2	<2	<2	<2
bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L		<10	<10	<10	<10	<10
Di-n-octylphthalate	117-84-0	2	µg/L		<2	<2	<2	<2	<2
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	2	µg/L		<2	<2	<2	<2	<2
N-Nitrosodiethylamine	55-18-5	2	µg/L		<2	<2	<2	<2	<2
N-Nitrosopyrrolidine	930-55-2	4	µg/L		<4	<4	<4	<4	<4
N-Nitrosomorpholine	59-89-2	2	µg/L		<2	<2	<2	<2	<2
N-Nitrosodi-n-propylamine	621-64-7	2	µg/L		<2	<2	<2	<2	<2
N-Nitrosopiperidine	100-75-4	2	µg/L		<2	<2	<2	<2	<2
N-Nitrosodibutylamine	924-16-3	2	µg/L		<2	<2	<2	<2	<2
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L		<4	<4	<4	<4	<4
Methapyrilene	91-80-5	2	µg/L		<2	<2	<2	<2	<2
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	2	µg/L		<2	<2	<2	<2	<2
Acetophenone	98-86-2	2	µg/L		<2	<2	<2	<2	<2
Nitrobenzene	98-95-3	2	µg/L		<2	<2	<2	<2	<2
Isophorone	78-59-1	2	µg/L		<2	<2	<2	<2	<2
2.6-Dinitrotoluene	606-20-2	4	µg/L		<4	<4	<4	<4	<4
2.4-Dinitrotoluene	121-14-2	4	µg/L		<4	<4	<4	<4	<4

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP075E: Nitroaromatics and Ketones - Continued									
1-Naphthylamine	134-32-7	2	µg/L		<2	<2	<2	<2	<2
4-Nitroquinoline-N-oxide	56-57-5	2	µg/L		<2	<2	<2	<2	<2
5-Nitro-o-toluidine	99-55-8	2	µg/L		<2	<2	<2	<2	<2
Azobenzene	103-33-3	2	µg/L		<2	<2	<2	<2	<2
1.3.5-Trinitrobenzene	99-35-4	2	µg/L		<2	<2	<2	<2	<2
Phenacetin	62-44-2	2	µg/L		<2	<2	<2	<2	<2
4-Aminobiphenyl	92-67-1	2	µg/L		<2	<2	<2	<2	<2
Pentachloronitrobenzene	82-68-8	2	µg/L		<2	<2	<2	<2	<2
Pronamide	23950-58-5	2	µg/L		<2	<2	<2	<2	<2
Dimethylaminoazobenzene	60-11-7	2	µg/L		<2	<2	<2	<2	<2
Chlorobenzilate	510-15-6	2	µg/L		<2	<2	<2	<2	<2
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	2	µg/L		<2	<2	<2	<2	<2
Bis(2-chloroethoxy) methane	111-91-1	2	µg/L		<2	<2	<2	<2	<2
4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L		<2	<2	<2	<2	<2
4-Bromophenyl phenyl ether	101-55-3	2	µg/L		<2	<2	<2	<2	<2
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	2	µg/L		<2	<2	<2	<2	<2
1.4-Dichlorobenzene	106-46-7	2	µg/L		<2	<2	<2	<2	<2
1.2-Dichlorobenzene	95-50-1	2	µg/L		<2	<2	<2	<2	<2
Hexachloroethane	67-72-1	2	µg/L		<2	<2	<2	<2	<2
1.2.4-Trichlorobenzene	120-82-1	2	µg/L		<2	<2	<2	<2	<2
Hexachloropropylene	1888-71-7	2	µg/L		<2	<2	<2	<2	<2
Hexachlorobutadiene	87-68-3	2	µg/L		<2	<2	<2	<2	<2
Hexachlorocyclopentadiene	77-47-4	10	µg/L		<10	<10	<10	<10	<10
Pentachlorobenzene	608-93-5	2	µg/L		<2	<2	<2	<2	<2
Hexachlorobenzene (HCB)	118-74-1	4	µg/L		<4	<4	<4	<4	<4
EP075H: Anilines and Benzidines									
Aniline	62-53-3	2	µg/L		<2	<2	<2	<2	<2
4-Chloroaniline	106-47-8	2	µg/L		<2	<2	<2	<2	<2
2-Nitroaniline	88-74-4	4	µg/L		<4	<4	<4	<4	<4
3-Nitroaniline	99-09-2	4	µg/L		<4	<4	<4	<4	<4
Dibenzofuran	132-64-9	2	µg/L		<2	<2	<2	<2	<2
4-Nitroaniline	100-01-6	2	µg/L		<2	<2	<2	<2	<2

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP075H: Anilines and Benzidines - Continued									
Carbazole	86-74-8	2	µg/L		<2	<2	<2	<2	<2
3.3`-Dichlorobenzidine	91-94-1	2	µg/L		<2	<2	<2	<2	<2
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	2	µg/L		<2	<2	<2	<2	<2
beta-BHC	319-85-7	2	µg/L		<2	<2	<2	<2	<2
gamma-BHC	58-89-9	2	µg/L		<2	<2	<2	<2	<2
delta-BHC	319-86-8	2	µg/L		<2	<2	<2	<2	<2
Heptachlor	76-44-8	2	µg/L		<2	<2	<2	<2	<2
Aldrin	309-00-2	2	µg/L		<2	<2	<2	<2	<2
Heptachlor epoxide	1024-57-3	2	µg/L		<2	<2	<2	<2	<2
alpha-Endosulfan	959-98-8	2	µg/L		<2	<2	<2	<2	<2
4.4`-DDE	72-55-9	2	µg/L		<2	<2	<2	<2	<2
Dieldrin	60-57-1	2	µg/L		<2	<2	<2	<2	<2
Endrin	72-20-8	2	µg/L		<2	<2	<2	<2	<2
beta-Endosulfan	33213-65-9	2	µg/L		<2	<2	<2	<2	<2
4.4`-DDD	72-54-8	2	µg/L		<2	<2	<2	<2	<2
Endosulfan sulfate	1031-07-8	2	µg/L		<2	<2	<2	<2	<2
4.4`-DDT	50-29-3	4	µg/L		<4	<4	<4	<4	<4
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	4	µg/L		<4	<4	<4	<4	<4
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	4	µg/L		<4	<4	<4	<4	<4
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	2	µg/L		<2	<2	<2	<2	<2
Dimethoate	60-51-5	2	µg/L		<2	<2	<2	<2	<2
Diazinon	333-41-5	2	µg/L		<2	<2	<2	<2	<2
Chlorpyrifos-methyl	5598-13-0	2	µg/L		<2	<2	<2	<2	<2
Malathion	121-75-5	2	µg/L		<2	<2	<2	<2	<2
Fenthion	55-38-9	2	µg/L		<2	<2	<2	<2	<2
Chlorpyrifos	2921-88-2	2	µg/L		<2	<2	<2	<2	<2
Pirimphos-ethyl	23505-41-1	2	µg/L		<2	<2	<2	<2	<2
Chlorfenvinphos	470-90-6	2	µg/L		<2	<2	<2	<2	<2
Ethion	563-12-2	2	µg/L		<2	<2	<2	<2	<2
Prothiofos	34643-46-4	2	µg/L		<2	<2	<2	<2	<2
EP231A: Perfluoroalkyl Sulfonic Acids									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	**0.02**	<0.01	**0.11**	**0.08**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	**0.03**	<0.01	**0.11**	**0.11**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	<0.02	**0.04**	**0.04**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	<0.02	**0.04**	**0.04**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	**0.02**	**0.01**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		<0.01	**0.05**	<0.01	**0.32**	**0.28**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**0.05**	<0.01	**0.22**	**0.19**
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	**0.05**	<0.01	**0.32**	**0.28**
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**99.1**	**100**	**101**	**103**	**99.4**
Toluene-D8	2037-26-5	5	%		**98.7**	**102**	**106**	**105**	**98.5**
4-Bromofluorobenzene	460-00-4	5	%		**106**	**107**	**117**	**108**	**105**
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	2	%		**25.1**	**21.6**	**42.6**	**52.5**	**54.9**
Phenol-d6	13127-88-3	2	%		**41.4**	**34.5**	**25.8**	**29.1**	**31.6**
2-Chlorophenol-D4	93951-73-6	2	%		**53.4**	**48.1**	**53.7**	**66.9**	**70.8**
2.4.6-Tribromophenol	118-79-6	2	%		**37.8**	**30.2**	**74.2**	**85.3**	**94.2**
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	2	%		**47.7**	**72.9**	**58.9**	**72.7**	**80.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	HB-BH01-C	HB-BH02-C	HB-BH03-C	HB-BH06-C	HB-BH06-C (s)
				Sampling date / time	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-001	EM2202619-002	EM2202619-003	EM2202619-004	EM2202619-005
					Result	Result	Result	Result	Result
EP075T: Base/Neutral Extractable Surrogates - Continued									
1.2-Dichlorobenzene-D4	2199-69-1	2	%		66.7	58.0	50.1	64.9	70.3
2-Fluorobiphenyl	321-60-8	2	%		75.3	65.4	63.6	73.1	81.4
Anthracene-d10	1719-06-8	2	%		95.0	81.4	71.9	80.9	90.4
4-Terphenyl-d14	1718-51-0	2	%		104	87.0	73.1	80.9	91.4
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		104	89.0	88.3	95.8	91.4
13C8-PFOA	----	0.02	%		106	108	106	104	104

Analytical Results

Sub-Matrix: **WATER**
(Matrix: **WATER**)

Compound	CAS Number	LOR	Unit	Sample ID	Rinsate Gloves	Rinsate Trowel	Rinsate Auger	Rinsate Trowel	Rinsate Gloves
				Sampling date / time	10-Feb-2022 00:00	10-Feb-2022 00:00	10-Feb-2022 00:00	08-Feb-2022 00:00	08-Feb-2022 00:00
					EM2202619-009	EM2202619-010	EM2202619-011	EM2202619-012	EM2202619-013
					Result	Result	Result	Result	Result
EP071: Total Petroleum Hydrocarbons									
C10 - C14 Fraction	----	50	µg/L		<50	<50	----	<50	<50
C15 - C28 Fraction	----	100	µg/L		<100	<100	----	<100	<100
C29 - C36 Fraction	----	50	µg/L		<50	<50	----	<50	<50
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	<50	----	<50	<50
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
>C10 - C16 Fraction	----	100	µg/L		<100	<100	----	<100	<100
>C16 - C34 Fraction	----	100	µg/L		<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	µg/L		<100	<100	----	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	<100	----	<100	<100
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	1	µg/L		----	----	<1	----	----
Toluene	108-88-3	2	µg/L		----	----	<2	----	----
Ethylbenzene	100-41-4	2	µg/L		----	----	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	----	<2	----	----
Styrene	100-42-5	5	µg/L		----	----	<5	----	----
ortho-Xylene	95-47-6	2	µg/L		----	----	<2	----	----
Isopropylbenzene	98-82-8	5	µg/L		----	----	<5	----	----
n-Propylbenzene	103-65-1	5	µg/L		----	----	<5	----	----
1.3.5-Trimethylbenzene	108-67-8	5	µg/L		----	----	<5	----	----
sec-Butylbenzene	135-98-8	5	µg/L		----	----	<5	----	----
1.2.4-Trimethylbenzene	95-63-6	5	µg/L		----	----	<5	----	----
tert-Butylbenzene	98-06-6	5	µg/L		----	----	<5	----	----
p-Isopropyltoluene	99-87-6	5	µg/L		----	----	<5	----	----
n-Butylbenzene	104-51-8	5	µg/L		----	----	<5	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	50	µg/L		----	----	<50	----	----
2-Butanone (MEK)	78-93-3	50	µg/L		----	----	<50	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L		----	----	<50	----	----
2-Hexanone (MBK)	591-78-6	50	µg/L		----	----	<50	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	5	µg/L		----	----	<5	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		----	----	<5	----	----
1.2-Dichloropropane	78-87-5	5	µg/L		----	----	<5	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	Rinsate Gloves	Rinsate Trowel	Rinsate Auger	Rinsate Trowel	Rinsate Gloves
			Sampling date / time	10-Feb-2022 00:00	10-Feb-2022 00:00	10-Feb-2022 00:00	08-Feb-2022 00:00	08-Feb-2022 00:00
Compound	CAS Number	LOR	Unit	EM2202619-009	EM2202619-010	EM2202619-011	EM2202619-012	EM2202619-013
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	----	----	<5	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	----	----	<5	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	----	----	<5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	----	----	<50	----	----
Chloromethane	74-87-3	50	µg/L	----	----	<50	----	----
Vinyl chloride	75-01-4	50	µg/L	----	----	<50	----	----
Bromomethane	74-83-9	50	µg/L	----	----	<50	----	----
Chloroethane	75-00-3	50	µg/L	----	----	<50	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	----	----	<50	----	----
1.1-Dichloroethene	75-35-4	5	µg/L	----	----	<5	----	----
Iodomethane	74-88-4	5	µg/L	----	----	<5	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L	----	----	<5	----	----
1.1-Dichloroethane	75-34-3	5	µg/L	----	----	<5	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L	----	----	<5	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L	----	----	<5	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L	----	----	<5	----	----
Carbon Tetrachloride	56-23-5	5	µg/L	----	----	<5	----	----
1.2-Dichloroethane	107-06-2	5	µg/L	----	----	<5	----	----
Trichloroethene	79-01-6	5	µg/L	----	----	<5	----	----
Dibromomethane	74-95-3	5	µg/L	----	----	<5	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L	----	----	<5	----	----
1.3-Dichloropropane	142-28-9	5	µg/L	----	----	<5	----	----
Tetrachloroethene	127-18-4	5	µg/L	----	----	<5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	----	----	<5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	----	----	<5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	----	----	<5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	----	----	<5	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L	----	----	<5	----	----
Pentachloroethane	76-01-7	5	µg/L	----	----	<5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	----	----	<5	----	----
Hexachlorobutadiene	87-68-3	5	µg/L	----	----	<5	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	5	µg/L	----	----	<5	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Gloves	Rinsate Trowel	Rinsate Auger	Rinsate Trowel	Rinsate Gloves
				Sampling date / time	10-Feb-2022 00:00	10-Feb-2022 00:00	10-Feb-2022 00:00	08-Feb-2022 00:00	08-Feb-2022 00:00
Compound	CAS Number	LOR	Unit		EM2202619-009	EM2202619-010	EM2202619-011	EM2202619-012	EM2202619-013
					Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued									
Bromobenzene	108-86-1	5	µg/L		----	----	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L		----	----	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L		----	----	<5	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		----	----	<5	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		----	----	<5	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		----	----	<5	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		----	----	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		----	----	<5	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		----	----	<5	----	----
Bromodichloromethane	75-27-4	5	µg/L		----	----	<5	----	----
Dibromochloromethane	124-48-1	5	µg/L		----	----	<5	----	----
Bromoform	75-25-2	5	µg/L		----	----	<5	----	----
EP074H: Naphthalene									
Naphthalene	91-20-3	5	µg/L		----	----	<5	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		----	----	**94.6**	----	----
Toluene-D8	2037-26-5	5	%		----	----	**95.5**	----	----
4-Bromofluorobenzene	460-00-4	5	%		----	----	**104**	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		----	----	**0.026**	----	----
Boron	7440-42-8	0.05	mg/L		----	----	<0.05	----	----
Barium	7440-39-3	0.001	mg/L		----	----	**0.051**	----	----
Beryllium	7440-41-7	0.001	mg/L		----	----	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L		----	----	<0.0001	----	----
Cobalt	7440-48-4	0.001	mg/L		----	----	**0.017**	----	----
Chromium	7440-47-3	0.001	mg/L		----	----	**0.005**	----	----
Copper	7440-50-8	0.001	mg/L		----	----	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L		----	----	**0.492**	----	----
Nickel	7440-02-0	0.001	mg/L		----	----	**0.020**	----	----
Lead	7439-92-1	0.001	mg/L		----	----	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L		----	----	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		----	----	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		----	----	**0.047**	----	----
Titanium	7440-32-6	0.01	mg/L		----	----	<0.01	----	----
Iron	7439-89-6	0.05	mg/L		----	----	**152**	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	----	<0.0001	----	----
EK025SF: Free CN by Segmented Flow Analyser									
Free Cyanide	----	0.004	mg/L		----	----	<0.004	----	----
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.004	mg/L		----	----	<0.004	----	----
EK085M: Sulfide as S2-									
Sulfide as S2-	18496-25-8	0.1	mg/L		----	----	<0.1	----	----
EP071: Total Petroleum Hydrocarbons									
C10 - C14 Fraction	----	50	µg/L		<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	<50	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	<50	----	----	----
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
>C10 - C16 Fraction	----	100	µg/L		<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	<100	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	1	µg/L		----	<1	----	----	----
Toluene	108-88-3	2	µg/L		----	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L		----	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	<2	----	----	----
Styrene	100-42-5	5	µg/L		----	<5	----	----	----
ortho-Xylene	95-47-6	2	µg/L		----	<2	----	----	----
Isopropylbenzene	98-82-8	5	µg/L		----	<5	----	----	----
n-Propylbenzene	103-65-1	5	µg/L		----	<5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	5	µg/L		----	<5	----	----	----
sec-Butylbenzene	135-98-8	5	µg/L		----	<5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	5	µg/L		----	<5	----	----	----
tert-Butylbenzene	98-06-6	5	µg/L		----	<5	----	----	----
p-Isopropyltoluene	99-87-6	5	µg/L		----	<5	----	----	----
n-Butylbenzene	104-51-8	5	µg/L		----	<5	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	50	µg/L		----	<50	----	----	----
2-Butanone (MEK)	78-93-3	50	µg/L		----	<50	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L		----	<50	----	----	----
2-Hexanone (MBK)	591-78-6	50	µg/L		----	<50	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	5	µg/L		----	<5	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		----	<5	----	----	----
1.2-Dichloropropane	78-87-5	5	µg/L		----	<5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		----	<5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		----	<5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		----	<5	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		----	<50	----	----	----
Chloromethane	74-87-3	50	µg/L		----	<50	----	----	----
Vinyl chloride	75-01-4	50	µg/L		----	<50	----	----	----
Bromomethane	74-83-9	50	µg/L		----	<50	----	----	----
Chloroethane	75-00-3	50	µg/L		----	<50	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L		----	<50	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloroethene	75-35-4	5	µg/L		----	<5	----	----	----
Iodomethane	74-88-4	5	µg/L		----	<5	----	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		----	<5	----	----	----
1.1-Dichloroethane	75-34-3	5	µg/L		----	<5	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		----	<5	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		----	<5	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		----	<5	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		----	<5	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		----	<5	----	----	----
Trichloroethene	79-01-6	5	µg/L		----	<5	----	----	----
Dibromomethane	74-95-3	5	µg/L		----	<5	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		----	<5	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		----	<5	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		----	<5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		----	<5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		----	<5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		----	<5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		----	<5	----	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		----	<5	----	----	----
Pentachloroethane	76-01-7	5	µg/L		----	<5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		----	<5	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		----	<5	----	----	----
Bromobenzene	108-86-1	5	µg/L		----	<5	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L		----	<5	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L		----	<5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		----	<5	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		----	<5	----	----	----
Bromodichloromethane	75-27-4	5	µg/L		----	<5	----	----	----
Dibromochloromethane	124-48-1	5	µg/L		----	<5	----	----	----
Bromoform	75-25-2	5	µg/L		----	<5	----	----	----
EP075A: Phenolic Compounds									
Phenol	108-95-2	2	µg/L		----	<2	<2	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP075A: Phenolic Compounds - Continued									
2-Chlorophenol	95-57-8	2	µg/L		----	<2	<2	----	----
2-Methylphenol	95-48-7	2	µg/L		----	<2	<2	----	----
3- & 4-Methylphenol	1319-77-3	4	µg/L		----	<4	<4	----	----
2-Nitrophenol	88-75-5	2	µg/L		----	<2	<2	----	----
2.4-Dimethylphenol	105-67-9	2	µg/L		----	<2	<2	----	----
2.4-Dichlorophenol	120-83-2	2	µg/L		----	<2	<2	----	----
2.6-Dichlorophenol	87-65-0	2	µg/L		----	<2	<2	----	----
4-Chloro-3-methylphenol	59-50-7	2	µg/L		----	<2	<2	----	----
2.4.6-Trichlorophenol	88-06-2	2	µg/L		----	<2	<2	----	----
2.4.5-Trichlorophenol	95-95-4	2	µg/L		----	<2	<2	----	----
Pentachlorophenol	87-86-5	4	µg/L		----	<4	<4	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	2	µg/L		----	<2	<2	----	----
2-Methylnaphthalene	91-57-6	2	µg/L		----	<2	<2	----	----
2-Chloronaphthalene	91-58-7	2	µg/L		----	<2	<2	----	----
Acenaphthylene	208-96-8	2	µg/L		----	<2	<2	----	----
Acenaphthene	83-32-9	2	µg/L		----	<2	<2	----	----
Fluorene	86-73-7	2	µg/L		----	<2	<2	----	----
Phenanthrene	85-01-8	2	µg/L		----	<2	<2	----	----
Anthracene	120-12-7	2	µg/L		----	<2	<2	----	----
Fluoranthene	206-44-0	2	µg/L		----	<2	<2	----	----
Pyrene	129-00-0	2	µg/L		----	<2	<2	----	----
N-2-Fluorenyl Acetamide	53-96-3	2	µg/L		----	<2	<2	----	----
Benz(a)anthracene	56-55-3	2	µg/L		----	<2	<2	----	----
Chrysene	218-01-9	2	µg/L		----	<2	<2	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L		----	<4	<4	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L		----	<2	<2	----	----
Benzo(a)pyrene	50-32-8	2	µg/L		----	<2	<2	----	----
3-Methylcholanthrene	56-49-5	2	µg/L		----	<2	<2	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L		----	<2	<2	----	----
Dibenz(a.h)anthracene	53-70-3	2	µg/L		----	<2	<2	----	----
Benzo(g.h.i)perylene	191-24-2	2	µg/L		----	<2	<2	----	----
^ Sum of PAHs	----	2	µg/L		----	<2	<2	----	----
^ Benzo(a)pyrene TEQ (zero)	----	2	µg/L		----	<2	<2	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	2	µg/L		----	<2	<2	----	----
Diethyl phthalate	84-66-2	2	µg/L		----	<2	<2	----	----
Di-n-butyl phthalate	84-74-2	2	µg/L		----	<2	<2	----	----
Butyl benzyl phthalate	85-68-7	2	µg/L		----	<2	<2	----	----
bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L		----	<10	<10	----	----
Di-n-octylphthalate	117-84-0	2	µg/L		----	<2	<2	----	----
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	2	µg/L		----	<2	<2	----	----
N-Nitrosodiethylamine	55-18-5	2	µg/L		----	<2	<2	----	----
N-Nitrosopyrrolidine	930-55-2	4	µg/L		----	<4	<4	----	----
N-Nitrosomorpholine	59-89-2	2	µg/L		----	<2	<2	----	----
N-Nitrosodi-n-propylamine	621-64-7	2	µg/L		----	<2	<2	----	----
N-Nitrosopiperidine	100-75-4	2	µg/L		----	<2	<2	----	----
N-Nitrosodibutylamine	924-16-3	2	µg/L		----	<2	<2	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L		----	<4	<4	----	----
Methapyrilene	91-80-5	2	µg/L		----	<2	<2	----	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	2	µg/L		----	<2	<2	----	----
Acetophenone	98-86-2	2	µg/L		----	<2	<2	----	----
Nitrobenzene	98-95-3	2	µg/L		----	<2	<2	----	----
Isophorone	78-59-1	2	µg/L		----	<2	<2	----	----
2.6-Dinitrotoluene	606-20-2	4	µg/L		----	<4	<4	----	----
2.4-Dinitrotoluene	121-14-2	4	µg/L		----	<4	<4	----	----
1-Naphthylamine	134-32-7	2	µg/L		----	<2	<2	----	----
4-Nitroquinoline-N-oxide	56-57-5	2	µg/L		----	<2	<2	----	----
5-Nitro-o-toluidine	99-55-8	2	µg/L		----	<2	<2	----	----
Azobenzene	103-33-3	2	µg/L		----	<2	<2	----	----
1.3.5-Trinitrobenzene	99-35-4	2	µg/L		----	<2	<2	----	----
Phenacetin	62-44-2	2	µg/L		----	<2	<2	----	----
4-Aminobiphenyl	92-67-1	2	µg/L		----	<2	<2	----	----
Pentachloronitrobenzene	82-68-8	2	µg/L		----	<2	<2	----	----
Pronamide	23950-58-5	2	µg/L		----	<2	<2	----	----
Dimethylaminoazobenzene	60-11-7	2	µg/L		----	<2	<2	----	----
Chlorobenzilate	510-15-6	2	µg/L		----	<2	<2	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP075E: Nitroaromatics and Ketones - Continued									
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	2	µg/L		----	<2	<2	----	----
Bis(2-chloroethoxy) methane	111-91-1	2	µg/L		----	<2	<2	----	----
4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L		----	<2	<2	----	----
4-Bromophenyl phenyl ether	101-55-3	2	µg/L		----	<2	<2	----	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	2	µg/L		----	<2	<2	----	----
1.4-Dichlorobenzene	106-46-7	2	µg/L		----	<2	<2	----	----
1.2-Dichlorobenzene	95-50-1	2	µg/L		----	<2	<2	----	----
Hexachloroethane	67-72-1	2	µg/L		----	<2	<2	----	----
1.2.4-Trichlorobenzene	120-82-1	2	µg/L		----	<2	<2	----	----
Hexachloropropylene	1888-71-7	2	µg/L		----	<2	<2	----	----
Hexachlorobutadiene	87-68-3	2	µg/L		----	<2	<2	----	----
Hexachlorocyclopentadiene	77-47-4	10	µg/L		----	<10	<10	----	----
Pentachlorobenzene	608-93-5	2	µg/L		----	<2	<2	----	----
Hexachlorobenzene (HCB)	118-74-1	4	µg/L		----	<4	<4	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	2	µg/L		----	<2	<2	----	----
4-Chloroaniline	106-47-8	2	µg/L		----	<2	<2	----	----
2-Nitroaniline	88-74-4	4	µg/L		----	<4	<4	----	----
3-Nitroaniline	99-09-2	4	µg/L		----	<4	<4	----	----
Dibenzofuran	132-64-9	2	µg/L		----	<2	<2	----	----
4-Nitroaniline	100-01-6	2	µg/L		----	<2	<2	----	----
Carbazole	86-74-8	2	µg/L		----	<2	<2	----	----
3.3`-Dichlorobenzidine	91-94-1	2	µg/L		----	<2	<2	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	2	µg/L		----	<2	<2	----	----
beta-BHC	319-85-7	2	µg/L		----	<2	<2	----	----
gamma-BHC	58-89-9	2	µg/L		----	<2	<2	----	----
delta-BHC	319-86-8	2	µg/L		----	<2	<2	----	----
Heptachlor	76-44-8	2	µg/L		----	<2	<2	----	----
Aldrin	309-00-2	2	µg/L		----	<2	<2	----	----
Heptachlor epoxide	1024-57-3	2	µg/L		----	<2	<2	----	----
alpha-Endosulfan	959-98-8	2	µg/L		----	<2	<2	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP075I: Organochlorine Pesticides - Continued									
4.4`-DDE	72-55-9	2	µg/L		----	<2	<2	----	----
Dieldrin	60-57-1	2	µg/L		----	<2	<2	----	----
Endrin	72-20-8	2	µg/L		----	<2	<2	----	----
beta-Endosulfan	33213-65-9	2	µg/L		----	<2	<2	----	----
4.4`-DDD	72-54-8	2	µg/L		----	<2	<2	----	----
Endosulfan sulfate	1031-07-8	2	µg/L		----	<2	<2	----	----
4.4`-DDT	50-29-3	4	µg/L		----	<4	<4	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	4	µg/L		----	<4	<4	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	4	µg/L		----	<4	<4	----	----
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	2	µg/L		----	<2	<2	----	----
Dimethoate	60-51-5	2	µg/L		----	<2	<2	----	----
Diazinon	333-41-5	2	µg/L		----	<2	<2	----	----
Chlorpyrifos-methyl	5598-13-0	2	µg/L		----	<2	<2	----	----
Malathion	121-75-5	2	µg/L		----	<2	<2	----	----
Fenthion	55-38-9	2	µg/L		----	<2	<2	----	----
Chlorpyrifos	2921-88-2	2	µg/L		----	<2	<2	----	----
Pirimphos-ethyl	23505-41-1	2	µg/L		----	<2	<2	----	----
Chlorfenvinphos	470-90-6	2	µg/L		----	<2	<2	----	----
Ethion	563-12-2	2	µg/L		----	<2	<2	----	----
Prothiofos	34643-46-4	2	µg/L		----	<2	<2	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		----	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		----	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		----	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		----	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		----	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		----	<0.02	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
				Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
					Result	Result	Result	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		----	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		----	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		----	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		----	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		----	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		----	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		----	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		----	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		----	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		----	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		----	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		----	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		----	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		----	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		----	<0.05	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	Rinsate Auger	Rinsate 1 Glove	QC_01	----	----
			Sampling date / time	08-Feb-2022 00:00	15-Feb-2022 00:00	15-Feb-2022 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2202619-014	EM2202619-015	EM2202619-016	--------	--------
				Result	Result	Result	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	5	%	----	**98.5**	----	----	----
Toluene-D8	2037-26-5	5	%	----	**100**	----	----	----
4-Bromofluorobenzene	460-00-4	5	%	----	**108**	----	----	----
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	2	%	----	**45.9**	**53.4**	----	----
Phenol-d6	13127-88-3	2	%	----	**27.2**	**30.8**	----	----
2-Chlorophenol-D4	93951-73-6	2	%	----	**59.7**	**70.4**	----	----
2.4.6-Tribromophenol	118-79-6	2	%	----	**82.6**	**98.8**	----	----
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	2	%	----	**66.4**	**81.0**	----	----
1.2-Dichlorobenzene-D4	2199-69-1	2	%	----	**58.6**	**72.0**	----	----
2-Fluorobiphenyl	321-60-8	2	%	----	**68.9**	**83.4**	----	----
Anthracene-d10	1719-06-8	2	%	----	**79.6**	**97.2**	----	----
4-Terphenyl-d14	1718-51-0	2	%	----	**89.3**	**94.2**	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	----	**102**	----	----	----
13C8-PFOA	----	0.02	%	----	**104**	----	----	----

Analytical Results

Sub-Matrix: ZHE LEACHATE (Matrix: WATER)			Sample ID	HB-BH01-C-0.1	----	----	----	----
			Sampling date / time	04-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2202619-006	--------	--------	--------	--------
				Result	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	0.004	mg/L	<0.004	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	HB-BH01-C-0.1 - 04-Feb-2022 00:00	Brown soil with rock matter.
EA200: Description	HB-BH01-C-0.5 - 04-Feb-2022 00:00	Beige soil with rock matter.
EA200: Description	QC01 - 04-Feb-2022 00:00	Beige soil with rock matter.

Surrogate Control Limits

Sub-Matrix: **ASLP LEACHATE**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	41	125
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	117
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	51	127
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	51
2-Chlorophenol-D4	93951-73-6	30	114
2.4.6-Tribromophenol	118-79-6	26	133
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	35	127
Anthracene-d10	1719-06-8	44	122
4-Terphenyl-d14	1718-51-0	44	124

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	36	140
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	54	134
Phenol-d6	13127-88-3	62	122
2-Chlorophenol-D4	93951-73-6	52	127
2.4.6-Tribromophenol	118-79-6	38	133
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	67	128
1.2-Dichlorobenzene-D4	2199-69-1	63	108

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075T: Base/Neutral Extractable Surrogates - Continued			
2-Fluorobiphenyl	321-60-8	70	127
Anthracene-d10	1719-06-8	58	138
4-Terphenyl-d14	1718-51-0	50	138
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124
EP231S: PFAS Surrogate			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

Sub-Matrix: TCLP LEACHATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	41	125
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	117
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	51	127
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	51
2-Chlorophenol-D4	93951-73-6	30	114
2.4.6-Tribromophenol	118-79-6	26	133
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	35	127
Anthracene-d10	1719-06-8	44	122
4-Terphenyl-d14	1718-51-0	44	124

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	132
Toluene-D8	2037-26-5	77	132
4-Bromofluorobenzene	460-00-4	67	131
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	6	83
Phenol-d6	13127-88-3	10	65
2-Chlorophenol-D4	93951-73-6	22	112
2.4.6-Tribromophenol	118-79-6	22	125
EP075T: Base/Neutral Extractable Surrogates			

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075T: Base/Neutral Extractable Surrogates - Continued			
Nitrobenzene-D5	4165-60-0	37	115
1.2-Dichlorobenzene-D4	2199-69-1	32	99
2-Fluorobiphenyl	321-60-8	39	116
Anthracene-d10	1719-06-8	49	123
4-Terphenyl-d14	1718-51-0	47	129
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2202619**	Page	: 1 of 46
Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	[redacted]
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS360318	Date Samples Received	: 17-Feb-2022
Order number	: ----	Date Analysis Commenced	: 19-Feb-2022
C-O-C number	: ----	Issue Date	: 25-Feb-2022
Sampler	: AV		
Site	: ----		
Quote number	: ME/030/22		
No. of samples received	: 19		
No. of samples analysed	: 18		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4187882)									
EM2201970-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	20	20	0.0	No Limit
		EG005T: Titanium	7440-32-6	10	mg/kg	40	40	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	15	12.8	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	22	92.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	8	12	38.4	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	17	16	8.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	48	55	14.0	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	6	6	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EM2202619-008	HB-BH01-C-2	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	10	20	0.0	No Limit
		EG005T: Titanium	7440-32-6	10	mg/kg	10	10	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	2	2	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4187882) - continued									
EM2202619-008	HB-BH01-C-2	EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	21	24	13.6	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4184127)									
EM2202608-014	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	10.1	10.3	1.5	0% - 20%
EM2202633-008	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	10.6	10.4	1.3	0% - 20%
EA010: Conductivity (1:5) (QC Lot: 4184493)									
EM2202619-007	HB-BH01-C-0.5	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	20	22	12.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4186024)									
EM2202619-006	HB-BH01-C-0.1	EA055: Moisture Content	----	0.1	%	14.4	11.0	26.0	0% - 50%
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM) (QC Lot: 4191196)									
EM2202619-007	HB-BH01-C-0.5	ED040N: Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	<50	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 4184492)									
EM2202619-007	HB-BH01-C-0.5	ED045G: Chloride	16887-00-6	10	mg/kg	<10	<10	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4187883)									
EM2201970-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2202619-008	HB-BH01-C-2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4187376)									
EM2202537-002	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2202129-001	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4188536)									
EM2202619-007	HB-BH01-C-0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4184484) - continued									
EM2202635-008	Anonymous	EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4184484) - continued									
EM2202635-008	Anonymous	EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 4184484)									
EM2202635-008	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4188533)									
EM2202619-006	HB-BH01-C-0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075A: Phenolic Compounds (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075A: Phenolic Compounds (QC Lot: 4188535) - continued									
EM2202619-007	HB-BH01-C-0.5	EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075D: Nitrosamines (QC Lot: 4188535) - continued									
EM2202619-007	HB-BH01-C-0.5	EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit
EP075F: Haloethers (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075G: Chlorinated Hydrocarbons (QC Lot: 4188535) - continued									
EM2202619-007	HB-BH01-C-0.5	EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 4188535)									
EM2202619-007	HB-BH01-C-0.5	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4184483)									
EM2202474-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4188534)									
EM2202619-006	HB-BH01-C-0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	240	180	32.8	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	810	660	20.7	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	1050	# 840	22.2	0% - 20%
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4184483)									
EM2202474-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4188534)									
EM2202619-006	HB-BH01-C-0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	700	550	22.9	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	1210	940	25.3	0% - 50%
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	1910	# 1490	24.7	0% - 20%
EP080: BTEXN (QC Lot: 4184483)									
EM2202474-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4190410)									
EM2202595-038	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2202595-108	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4190410)									
EM2202595-038	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4190410) - continued									
EM2202595-038	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EM2202595-108	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4190410)									
EM2202595-038	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2202595-108	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4190410) - continued									
EM2202595-108	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4190410)									
EM2202595-038	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2202595-108	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4190410)									
EM2202595-038	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
EM2202595-108	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)C: Leachable Metals by ICPAES (QC Lot: 4191025)									
EM2202502-003	Anonymous	EG005C: Beryllium	7440-41-7	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG005C: Cadmium	7440-43-9	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG005C: Selenium	7782-49-2	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG005C: Arsenic	7440-38-2	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Barium	7440-39-3	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Boron	7440-42-8	0.1	mg/L	0.2	0.2	0.0	No Limit
		EG005C: Chromium	7440-47-3	0.1	mg/L	<0.1	<0.1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)C: Leachable Metals by ICPAES (QC Lot: 4191025) - continued									
EM2202502-003	Anonymous	EG005C: Cobalt	7440-48-4	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Copper	7440-50-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Manganese	7439-96-5	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Titanium	7440-32-6	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Vanadium	7440-62-2	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Zinc	7440-66-6	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EM2202650-010	Anonymous	EG005C: Beryllium	7440-41-7	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG005C: Cadmium	7440-43-9	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG005C: Selenium	7782-49-2	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG005C: Arsenic	7440-38-2	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Barium	7440-39-3	0.1	mg/L	1.0	0.9	0.0	No Limit
		EG005C: Boron	7440-42-8	0.1	mg/L	0.1	0.1	0.0	No Limit
		EG005C: Chromium	7440-47-3	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Cobalt	7440-48-4	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Copper	7440-50-8	0.1	mg/L	5.2	5.1	0.0	0% - 20%
		EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Manganese	7439-96-5	0.1	mg/L	0.4	0.4	0.0	No Limit
		EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Titanium	7440-32-6	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Vanadium	7440-62-2	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG005C: Zinc	7440-66-6	0.1	mg/L	2.4	2.4	0.0	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 4186853)									
EM2202606-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	815	831	1.9	0% - 20%
EM2202666-004	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	12800	14200	10.5	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 4186533)									
EM2202557-019	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	5000	5040	0.8	0% - 20%
EM2202557-030	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	3200	3250	1.7	0% - 20%
EM2202568-002	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	5920	5800	2.0	0% - 20%
EM2202573-003	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	7340	7330	0.3	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 4186534)									
EM2202619-003	HB-BH03-C	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	264	250	5.5	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4189968)									
EM2202619-001	HB-BH01-C	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.026	0.026	0.0	0% - 20%
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.054	0.054	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.005	0.005	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4189968) - continued									
EM2202619-001	HB-BH01-C	EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.018	0.018	0.0	0% - 50%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.494	0.493	0.4	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.020	0.020	0.0	0% - 50%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.050	0.048	4.9	0% - 50%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	150	148	1.3	0% - 20%
EM2202760-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.100	0.104	3.7	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.006	0.007	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.231	0.233	0.6	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.075	0.074	1.7	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.069	0.069	0.0	0% - 50%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.11	0.11	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4189969)									
EM2202619-001	HB-BH01-C	EG020B-F: Titanium	7440-32-6	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EM2202760-001	Anonymous	EG020B-F: Titanium	7440-32-6	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EG035C: Leachable Mercury by FIMS (QC Lot: 4194918)									
EM2202619-006	HB-BH01-C-0.1	EG035C: Mercury	7439-97-6	0.0001	mg/L	<0.0010	<0.0010	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4189970)									
EM2202619-001	HB-BH01-C	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EM2202760-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK025SF: Free CN by Segmented Flow Analyser (QC Lot: 4189735)									
EM2202619-001	HB-BH01-C	EK025SF: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.0	No Limit
EM2202847-003	Anonymous	EK025SF: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4189736)									
EM2202619-001	HB-BH01-C	EK026SF: Total Cyanide	57-12-5	0.004	mg/L	<0.004	<0.004	0.0	No Limit
EM2202847-003	Anonymous	EK026SF: Total Cyanide	57-12-5	0.004	mg/L	0.006	<0.004	42.2	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4195680)									
EM2202619-006	HB-BH01-C-0.1	EK026SF: Total Cyanide	57-12-5	0.004	mg/L	<0.004	<0.004	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 4184793)									
EM2202557-021	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EM2202557-030	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 4185511)									
EM2202610-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.52	0.52	0.0	0% - 20%
EM2202666-006	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.06	146	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 4184236)									
EM2202619-001	HB-BH01-C	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EM2202693-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	0.11	0.11	0.0	0% - 50%
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 4184794)									
EM2202557-021	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.39	0.39	0.0	0% - 20%
EM2202557-030	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 4185512)									
EM2202614-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EM2202666-007	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.02	0.02	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 4186568)									
EM2202614-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.9	1.0	0.0	0% - 50%
EM2202613-015	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.4	0.4	0.0	No Limit
EK085M: Sulfide as S2- (QC Lot: 4185330)									
EM2202619-001	HB-BH01-C	EK085: Sulfide as S2-	18496-25-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EM2202679-003	Anonymous	EK085: Sulfide as S2-	18496-25-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4186973)									
EM2202619-006	HB-BH01-C-0.1	EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	<1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4186972)									
EM2202619-006	HB-BH01-C-0.1	EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4186972) - continued									
EM2202619-006	HB-BH01-C-0.1	EP068: Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	<2.0	0.0	No Limit
		EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	<2.0	0.0	No Limit
EP071: Total Petroleum Hydrocarbons (QC Lot: 4183875)									
EM2202619-015	Rinsate 1 Glove	EP071-SV: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071-SV: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071-SV: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071-SV: C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	0.0	No Limit
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4183875)									
EM2202619-015	Rinsate 1 Glove	EP071-SV: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071-SV: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071-SV: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071-SV: >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
EM2202642-001	Anonymous	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4183633) - continued									
EM2202642-001	Anonymous	EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
EM2202642-001	Anonymous	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EM2202642-001	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP074D: Fumigants (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
EM2202642-001	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4183633) - continued									
EM2202582-001	Anonymous	EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
EM2202642-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4183633) - continued									
EM2202642-001	Anonymous	EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
EM2202642-001	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	9	9	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
EM2202642-001	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
EP074H: Naphthalene (QC Lot: 4183633)									
EM2202582-001	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074H: Naphthalene (QC Lot: 4183633) - continued									
EM2202642-001	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4186974)									
EM2202619-006	HB-BH01-C-0.1	EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	<2.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	<2.0	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4186974)									
EM2202619-006	HB-BH01-C-0.1	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: Phenol	108-95-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	2	µg/L	<4	<4	0.0	No Limit
		EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075A: Phenolic Compounds (QC Lot: 4183874) - continued									
EM2202619-015	Rinsate 1 Glove	EP075: 2.6-Dichlorophenol	87-65-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	<4	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: Naphthalene	91-20-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Acenaphthene	83-32-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: Fluorene	86-73-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Phenanthrene	85-01-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Anthracene	120-12-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Fluoranthene	206-44-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pyrene	129-00-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chrysene	218-01-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	<4	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	<10	0.0	No Limit
		EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	<2	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075D: Nitrosamines (QC Lot: 4183874) - continued									
EM2202619-015	Rinsate 1 Glove	EP075: N-Nitrosopiperidine	100-75-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Methapyrilene	91-80-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	<4	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	<4	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: 2-Picoline	109-06-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Acetophenone	98-86-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Isophorone	78-59-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Azobenzene	103-33-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Phenacetin	62-44-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pronamide	23950-58-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	4	µg/L	<4	<4	0.0	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	4	µg/L	<4	<4	0.0	No Limit
EP075F: Haloethers (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	<2	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	<10	0.0	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1.3-Dichlorobenzene	541-73-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	<4	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075H: Anilines and Benzidines (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: Aniline	62-53-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: Carbazole	86-74-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	4	µg/L	<4	<4	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	4	µg/L	<4	<4	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: alpha-BHC	319-84-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: beta-BHC	319-85-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: gamma-BHC	58-89-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: delta-BHC	319-86-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Heptachlor	76-44-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Aldrin	309-00-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4.4`-DDE	72-55-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dieldrin	60-57-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Endrin	72-20-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4.4`-DDD	72-54-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4.4`-DDT	50-29-3	4	µg/L	<4	<4	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 4183874)									
EM2202619-015	Rinsate 1 Glove	EP075: Dichlorvos	62-73-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dimethoate	60-51-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Diazinon	333-41-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: Malathion	121-75-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Fenthion	55-38-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: Prothiofos	34643-46-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Ethion	563-12-2	2	µg/L	<2	<2	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4187882)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	94.3	70.0	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	99.3 mg/kg	91.7	70.0	130
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	0.67 mg/kg	101	70.0	130
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	56.9	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	99.9	70.0	130
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	11.2 mg/kg	86.7	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	93.7	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	90.5	70.0	130
EG005T: Manganese	7439-96-5	5	mg/kg	<5	590 mg/kg	89.6	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	95.5	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	61.3 mg/kg	91.6	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	76.0	70.0	130
EG005T: Titanium	7440-32-6	10	mg/kg	<10	958 mg/kg	90.6	70.0	130
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4184127)								
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101
				----	7 pH Unit	100	99.3	101
EA010: Conductivity (1:5) (QCLot: 4184493)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	1413 µS/cm	99.8	94.5	105
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM) (QCLot: 4191196)								
ED040N: Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	3000 mg/kg	105	86.1	116
ED045G: Chloride by Discrete Analyser (QCLot: 4184492)								
ED045G: Chloride	16887-00-6	10	mg/kg	<10	50 mg/kg	95.4	85.5	120
				<10	5000 mg/kg	98.0	85.5	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4187883)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	89.8	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4187376)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	84.6	70.0	130
EN60Z: ASLP Leachate - ZHE (QCLot: 4193408)								
EN60Za: Extraction Fluid pH	----	0.1	pH Unit	5.0	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4188536)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	123	68.0	133

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4184484)								
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	103	66.4	121
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	88.1	70.6	116
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	88.4	70.4	117
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	86.4	70.0	119
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	86.5	70.8	115
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	91.4	72.6	120
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	79.8	68.6	116
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	76.8	59.8	113
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	77.1	63.4	112
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	74.3	61.5	114
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	78.3	63.1	112
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	79.1	63.6	113
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	73.9	60.8	114
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	64.2	54.9	113
EP074B: Oxygenated Compounds (QCLot: 4184484)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	101	51.4	128
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	98.3	61.2	128
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	104	63.2	137
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	91.1	65.0	130
EP074C: Sulfonated Compounds (QCLot: 4184484)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	85.1	48.5	132
EP074D: Fumigants (QCLot: 4184484)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	89.0	61.4	116
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	91.4	70.1	116
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	89.9	61.7	112
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	88.4	63.8	110
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	86.0	67.0	114
EP074E: Halogenated Aliphatic Compounds (QCLot: 4184484)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	81.5	26.0	137
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	90.8	49.4	140
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	102	46.0	138
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	89.2	39.1	127
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	83.8	59.2	128
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	86.4	60.1	124
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	86.6	55.2	122
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	61.1	47.0	125
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	92.0	63.6	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 4184484) - continued								
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	94.1	64.5	120
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	97.9	67.5	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	91.0	57.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	90.6	60.3	120
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	84.1	57.7	113
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	101	68.9	117
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	93.9	65.5	119
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	93.4	68.4	115
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	99.9	69.8	118
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	92.9	70.6	118
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	81.5	65.6	117
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	82.3	62.8	106
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	88.6	58.9	117
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	75.7	57.8	110
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	102	72.3	127
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	96.0	69.0	123
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	77.1	59.0	100
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	86.1	60.8	111
EP074F: Halogenated Aromatic Compounds (QCLot: 4184484)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	93.1	72.5	115
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	87.5	69.2	112
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	83.2	65.9	114
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	85.0	65.4	113
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	61.3	59.3	123
EP074G: Trihalomethanes (QCLot: 4184484)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	99.2	67.5	119
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	98.7	57.8	117
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	87.6	60.3	108
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	83.9	55.7	108
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4188533)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	93.3	85.7	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	93.3	81.0	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	95.4	83.6	120
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	92.1	81.3	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	96.2	79.4	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	98.4	81.7	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	96.8	78.3	124
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	98.4	79.9	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4188533) - continued								
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	97.7	76.9	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	99.1	80.9	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	90.8	70.0	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	96.5	80.4	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	88.7	70.2	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	94.8	67.9	122
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	94.5	65.8	123
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	94.4	65.8	127
EP075A: Phenolic Compounds (QCLot: 4188535)								
EP075: Phenol	108-95-2	0.5	mg/kg	<1.5	1.5 mg/kg	108	75.1	127
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<1.5	1.5 mg/kg	108	77.7	123
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<1.5	1.5 mg/kg	107	72.1	127
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.5	1.5 mg/kg	108	73.1	127
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<1.5	1.5 mg/kg	109	64.0	126
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<1.5	1.5 mg/kg	107	74.4	126
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<1.5	1.5 mg/kg	104	69.2	123
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<1.5	1.5 mg/kg	98.6	76.2	122
EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<1.5	1.5 mg/kg	99.0	68.9	124
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<1.5	1.5 mg/kg	95.2	65.5	123
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<1.5	1.5 mg/kg	93.1	61.0	123
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<2	1.5 mg/kg	111	43.1	131
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4188535)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<1.5	1.5 mg/kg	100	78.7	126
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<1.5	1.5 mg/kg	101	77.5	126
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<1.5	1.5 mg/kg	95.9	74.7	126
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<1.5	1.5 mg/kg	99.4	77.2	126
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<1.5	1.5 mg/kg	115	75.7	126
EP075: Fluorene	86-73-7	0.5	mg/kg	<1.5	1.5 mg/kg	121	78.6	126
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<1.5	1.5 mg/kg	104	78.1	128
EP075: Anthracene	120-12-7	0.5	mg/kg	<1.5	1.5 mg/kg	105	77.1	130
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<1.5	1.5 mg/kg	105	76.2	132
EP075: Pyrene	129-00-0	0.5	mg/kg	<1.5	1.5 mg/kg	106	70.7	135
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<1.5	1.5 mg/kg	111	63.8	134
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<1.5	1.5 mg/kg	107	75.1	133
EP075: Chrysene	218-01-9	0.5	mg/kg	<1.5	1.5 mg/kg	108	76.2	132
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<3	3 mg/kg	99.5	76.5	128
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<1.5	1.5 mg/kg	107	75.7	134

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4188535) - continued								
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<1.5	1.5 mg/kg	96.2	72.4	128
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<1.5	1.5 mg/kg	104	70.6	130
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<1.5	1.5 mg/kg	98.6	68.7	123
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<1.5	1.5 mg/kg	98.0	69.7	123
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<1.5	1.5 mg/kg	99.2	67.3	125
EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
EP075C: Phthalate Esters (QCLot: 4188535)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<1.5	1.5 mg/kg	98.8	74.6	125
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<1.5	1.5 mg/kg	109	76.7	126
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<1.5	1.5 mg/kg	106	76.0	132
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<1.5	1.5 mg/kg	107	74.1	134
EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<1.5	1.5 mg/kg	108	74.1	122
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<1.5	1.5 mg/kg	105	73.5	130
EP075D: Nitrosamines (QCLot: 4188535)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<1.5	1.5 mg/kg	114	65.0	136
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<1.5	1.5 mg/kg	108	68.8	130
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.5	1.5 mg/kg	114	67.7	126
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<1.5	1.5 mg/kg	112	69.3	130
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<1.5	1.5 mg/kg	112	70.8	130
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<1.5	1.5 mg/kg	101	73.3	128
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<1.5	1.5 mg/kg	104	60.6	136
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.5	1.5 mg/kg	111	74.0	125
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<1.5	1.5 mg/kg	43.4	10.0	115
EP075E: Nitroaromatics and Ketones (QCLot: 4188535)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<1.5	1.5 mg/kg	108	54.0	131
EP075: Acetophenone	98-86-2	0.5	mg/kg	<1.5	1.5 mg/kg	108	76.6	125
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<1.5	1.5 mg/kg	107	75.7	125
EP075: Isophorone	78-59-1	0.5	mg/kg	<1.5	1.5 mg/kg	107	76.8	126
EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.5	1.5 mg/kg	97.0	70.5	124
EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.5	1.5 mg/kg	106	68.3	124
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<1.5	1.5 mg/kg	60.1	10.0	107
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<1.5	1.5 mg/kg	67.7	10.0	134
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<1.5	1.5 mg/kg	102	56.8	132
EP075: Azobenzene	103-33-3	1	mg/kg	<2	1.5 mg/kg	116	74.4	125
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<1.5	1.5 mg/kg	101	37.9	132
EP075: Phenacetin	62-44-2	0.5	mg/kg	<1.5	1.5 mg/kg	115	69.7	128
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<1.5	1.5 mg/kg	120	25.6	130

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075E: Nitroaromatics and Ketones (QCLot: 4188535) - continued								
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<1.5	1.5 mg/kg	110	74.9	127
EP075: Pronamide	23950-58-5	0.5	mg/kg	<1.5	1.5 mg/kg	110	77.2	132
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<1.5	1.5 mg/kg	105	71.4	132
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<1.5	1.5 mg/kg	106	73.4	131
EP075F: Haloethers (QCLot: 4188535)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<1.5	1.5 mg/kg	107	74.0	131
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<1.5	1.5 mg/kg	107	75.2	127
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<1.5	1.5 mg/kg	119	77.0	126
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<1.5	1.5 mg/kg	110	73.9	125
EP075G: Chlorinated Hydrocarbons (QCLot: 4188535)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<1.5	1.5 mg/kg	106	77.9	123
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<1.5	1.5 mg/kg	107	77.3	124
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<1.5	1.5 mg/kg	105	76.8	125
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<1.5	1.5 mg/kg	96.9	73.1	125
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<1.5	1.5 mg/kg	105	72.8	125
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<1.5	1.5 mg/kg	74.3	64.5	131
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<1.5	1.5 mg/kg	99.9	75.8	127
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	45.7	10.0	128
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<1.5	1.5 mg/kg	116	76.7	125
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.5	1.5 mg/kg	109	75.1	128
EP075H: Anilines and Benzidines (QCLot: 4188535)								
EP075: Aniline	62-53-3	0.5	mg/kg	<1.5	1.5 mg/kg	90.1	40.2	131
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<1.5	1.5 mg/kg	45.9	10.0	114
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.5	1.5 mg/kg	95.4	65.9	122
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.5	1.5 mg/kg	97.2	40.6	137
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<1.5	1.5 mg/kg	116	78.0	126
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<1.5	1.5 mg/kg	107	54.4	137
EP075: Carbazole	86-74-8	0.5	mg/kg	<1.5	1.5 mg/kg	113	67.3	134
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<1.5	1.5 mg/kg	102	72.6	130
EP075I: Organochlorine Pesticides (QCLot: 4188535)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<1.5	1.5 mg/kg	112	76.6	127
EP075: beta-BHC	319-85-7	0.5	mg/kg	<1.5	1.5 mg/kg	112	72.5	132
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<1.5	1.5 mg/kg	116	75.3	129
EP075: delta-BHC	319-86-8	0.5	mg/kg	<1.5	1.5 mg/kg	106	72.1	133
EP075: Heptachlor	76-44-8	0.5	mg/kg	<1.5	1.5 mg/kg	96.2	71.5	131
EP075: Aldrin	309-00-2	0.5	mg/kg	<1.5	1.5 mg/kg	104	74.7	132
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<1.5	1.5 mg/kg	104	73.1	132
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<1.5	1.5 mg/kg	100	72.8	132

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075I: Organochlorine Pesticides (QCLot: 4188535) - continued								
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<1.5	1.5 mg/kg	111	76.1	129
EP075: Dieldrin	60-57-1	0.5	mg/kg	<1.5	1.5 mg/kg	104	74.7	133
EP075: Endrin	72-20-8	0.5	mg/kg	<1.5	1.5 mg/kg	109	70.4	129
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<1.5	1.5 mg/kg	112	72.1	129
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<1.5	1.5 mg/kg	126	75.0	130
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<1.5	1.5 mg/kg	103	67.2	137
EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.5	1.5 mg/kg	65.7	57.5	136
EP075J: Organophosphorus Pesticides (QCLot: 4188535)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<1.5	1.5 mg/kg	105	65.4	123
EP075: Dimethoate	60-51-5	0.5	mg/kg	<1.5	1.5 mg/kg	98.6	49.2	138
EP075: Diazinon	333-41-5	0.5	mg/kg	<1.5	1.5 mg/kg	117	75.8	132
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<1.5	1.5 mg/kg	102	70.9	129
EP075: Malathion	121-75-5	0.5	mg/kg	<1.5	1.5 mg/kg	109	67.9	134
EP075: Fenthion	55-38-9	0.5	mg/kg	<1.5	1.5 mg/kg	105	73.2	131
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<1.5	1.5 mg/kg	109	76.3	130
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<1.5	1.5 mg/kg	109	74.5	133
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<1.8	1.5 mg/kg	119	55.3	131
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<1.5	1.5 mg/kg	109	75.2	130
EP075: Ethion	563-12-2	0.5	mg/kg	<1.5	1.5 mg/kg	110	76.5	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4184483)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	97.0	58.6	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4188534)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	90.5	75.0	128
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	91.9	82.0	123
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	90.6	82.4	121
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	91.2	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4184483)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	92.9	59.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4188534)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	88.9	77.0	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	89.9	81.5	120
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	94.5	73.3	137
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	90.0	70.0	130
EP080: BTEXN (QCLot: 4184483)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	88.2	61.6	117
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	96.2	65.8	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	92.5	65.8	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 4184483) - continued								
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	98.1	64.8	134
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	97.5	68.7	132
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	91.7	61.8	123
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4190410)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	98.5	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	108	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	78.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	103	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	93.6	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	104	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4190410)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	97.0	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.8	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.1	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.7	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.9	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.2	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4190410)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.6	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4190410)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	94.7	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 mg/kg	100	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	99.2	65.0	137

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4190410) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00121 mg/kg	73.7	70.0	130
EP231P: PFAS Sums (QCLot: 4190410)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 4191025)								
EG005C: Arsenic	7440-38-2	0.1	mg/L	<0.1	1 mg/L	105	80.0	120
EG005C: Barium	7440-39-3	0.1	mg/L	<0.1	1 mg/L	105	80.0	120
EG005C: Beryllium	7440-41-7	0.05	mg/L	<0.05	1 mg/L	118	80.0	120
EG005C: Boron	7440-42-8	0.1	mg/L	<0.1	5 mg/L	110	80.0	120
EG005C: Cadmium	7440-43-9	0.05	mg/L	<0.05	1 mg/L	105	80.0	120
EG005C: Chromium	7440-47-3	0.1	mg/L	<0.1	1 mg/L	107	80.0	120
EG005C: Cobalt	7440-48-4	0.1	mg/L	<0.1	1 mg/L	105	80.0	120
EG005C: Copper	7440-50-8	0.1	mg/L	<0.1	1 mg/L	117	80.0	120
EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	1 mg/L	107	80.0	120
EG005C: Manganese	7439-96-5	0.1	mg/L	<0.1	1 mg/L	106	80.0	120
EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	1 mg/L	105	80.0	120
EG005C: Selenium	7782-49-2	0.05	mg/L	<0.05	1 mg/L	112	80.0	120
EG005C: Titanium	7440-32-6	0.1	mg/L	<0.1	1 mg/L	103	80.0	120
EG005C: Vanadium	7440-62-2	0.1	mg/L	<0.1	1 mg/L	107	80.0	120
EG005C: Zinc	7440-66-6	0.1	mg/L	<0.1	1 mg/L	106	80.0	120
EA010P: Conductivity by PC Titrator (QCLot: 4186853)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	1412 µS/cm	99.8	85.0	119
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 4186533)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	104	91.0	110
				<10	2460 mg/L	105	81.7	118
				<10	293 mg/L	97.3	91.0	110
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 4186534)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	101	91.0	110
				<10	2460 mg/L	102	81.7	118
EG020F: Dissolved Metals by ICP-MS (QCLot: 4189968)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	104	89.0	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	96.7	85.0	112
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	107	83.6	113

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4189968) - continued								
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	111	83.5	111
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	100.0	83.2	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	103	84.3	110
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	99.2	83.1	107
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	101	84.6	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	98.0	84.8	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	98.3	84.3	110
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	100	82.3	113
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	101	83.7	110
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	106	86.3	112
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	110	85.4	115
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	94.4	91.8	112
EG020F: Dissolved Metals by ICP-MS (QCLot: 4189969)								
EG020B-F: Titanium	7440-32-6	0.01	mg/L	<0.01	0.1 mg/L	91.5	81.7	114
EG035C: Leachable Mercury by FIMS (QCLot: 4194918)								
EG035C: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	85.7	72.0	115
EG035F: Dissolved Mercury by FIMS (QCLot: 4189970)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.2	71.6	116
EK025SF: Free CN by Segmented Flow Analyser (QCLot: 4189735)								
EK025SF: Free Cyanide	----	0.004	mg/L	<0.004	0.2 mg/L	113	85.8	115
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4189736)								
EK026SF: Total Cyanide	57-12-5	0.004	mg/L	<0.004	0.2 mg/L	99.0	77.7	116
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4195680)								
EK026SF: Total Cyanide	57-12-5	0.004	mg/L	<0.004	0.2 mg/L	87.5	77.7	116
EK055G: Ammonia as N by Discrete Analyser (QCLot: 4184793)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	94.7	84.1	116
EK055G: Ammonia as N by Discrete Analyser (QCLot: 4185511)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	109	84.1	116
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4184236)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	92.6	90.9	112
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4184794)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	98.7	90.0	117
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4185512)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	116	90.0	117
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 4186568)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	5 mg/L	79.1	70.0	117
EK085M: Sulfide as S2- (QCLot: 4185330)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EK085M: Sulfide as S2- (QCLot: 4185330) - continued								
EK085: Sulfide as S2-	18496-25-8	0.1	mg/L	<0.1	0.5 mg/L	102	81.9	116
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4186973)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	85.7	52.0	136
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4189102)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	90.5	52.0	136
EP068A: Organochlorine Pesticides (OC) (QCLot: 4186972)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	2.5 µg/L	81.4	50.6	119
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	2.5 µg/L	76.1	44.2	117
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	2.5 µg/L	84.0	53.7	119
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	2.5 µg/L	82.1	47.7	117
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	2.5 µg/L	83.4	52.5	117
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	2.5 µg/L	80.8	46.9	118
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	2.5 µg/L	82.5	48.0	115
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	2.5 µg/L	82.7	51.1	119
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	2.5 µg/L	81.8	48.4	120
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	2.5 µg/L	83.3	50.1	122
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	2.5 µg/L	82.0	51.0	118
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	2.5 µg/L	85.0	48.4	116
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	2.5 µg/L	82.5	49.3	116
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	2.5 µg/L	86.2	47.1	130
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	2.5 µg/L	82.8	51.6	118
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	2.5 µg/L	82.7	48.6	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	2.5 µg/L	74.6	49.4	128
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	2.5 µg/L	83.1	49.1	123
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	2.5 µg/L	83.7	45.6	126
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	2.5 µg/L	82.7	52.8	117
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	2.5 µg/L	82.3	47.1	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4189101)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	2.5 µg/L	95.9	50.6	119
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	2.5 µg/L	91.3	44.2	117
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	2.5 µg/L	100.0	53.7	119
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	2.5 µg/L	96.8	47.7	117
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	2.5 µg/L	98.2	52.5	117
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	2.5 µg/L	94.8	46.9	118
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	2.5 µg/L	94.5	48.0	115
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	2.5 µg/L	97.1	51.1	119
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	2.5 µg/L	96.8	48.4	120
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	2.5 µg/L	96.8	50.1	122

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 4189101) - continued								
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	2.5 µg/L	95.4	51.0	118
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	2.5 µg/L	97.5	48.4	116
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	2.5 µg/L	95.0	49.3	116
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	2.5 µg/L	107	47.1	130
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	2.5 µg/L	96.2	51.6	118
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	2.5 µg/L	95.0	48.6	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	2.5 µg/L	87.0	49.4	128
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	2.5 µg/L	99.0	49.1	123
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	2.5 µg/L	104	45.6	126
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	2.5 µg/L	95.6	52.8	117
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	2.5 µg/L	98.9	47.1	126
EP071: Total Petroleum Hydrocarbons (QCLot: 4183875)								
EP071-SV: C10 - C14 Fraction	----	50	µg/L	<50	4000 µg/L	69.4	47.2	122
EP071-SV: C15 - C28 Fraction	----	100	µg/L	<100	16900 µg/L	72.7	52.9	131
EP071-SV: C29 - C36 Fraction	----	50	µg/L	<50	8090 µg/L	71.6	50.4	127
EP071-SV: C10 - C36 Fraction (sum)	----	50	µg/L	<50	28990 µg/L	72.0	51.5	128
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4183875)								
EP071-SV: >C10 - C16 Fraction	----	100	µg/L	<100	5830 µg/L	72.1	49.1	125
EP071-SV: >C16 - C34 Fraction	----	100	µg/L	<100	21700 µg/L	71.9	51.6	128
EP071-SV: >C34 - C40 Fraction	----	100	µg/L	<100	1560 µg/L	73.0	47.2	130
EP071-SV: >C10 - C40 Fraction (sum)	----	100	µg/L	<100	29090 µg/L	72.0	51.2	127
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4183633)								
EP074: Benzene	71-43-2	1	µg/L	<1	20 µg/L	92.0	77.7	121
EP074: Toluene	108-88-3	2	µg/L	<2	20 µg/L	90.6	77.9	119
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	91.1	79.3	118
EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	101	78.2	119
EP074: Styrene	100-42-5	5	µg/L	<5	20 µg/L	97.1	80.9	116
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	98.0	81.8	119
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	20 µg/L	100	76.6	117
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	20 µg/L	97.3	69.5	116
EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	20 µg/L	95.8	72.1	114
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	20 µg/L	95.3	71.4	115
EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	20 µg/L	93.0	74.2	114
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	20 µg/L	95.9	73.4	116
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	20 µg/L	97.4	70.4	116
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	20 µg/L	91.6	64.1	115
EP074B: Oxygenated Compounds (QCLot: 4183633)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074B: Oxygenated Compounds (QCLot: 4183633) - continued								
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	200 µg/L	89.6	70.7	128
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	200 µg/L	90.9	58.0	134
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	200 µg/L	87.1	70.8	136
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	200 µg/L	95.2	67.1	132
EP074C: Sulfonated Compounds (QCLot: 4183633)								
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	20 µg/L	109	56.9	132
EP074D: Fumigants (QCLot: 4183633)								
EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	20 µg/L	101	71.1	118
EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	20 µg/L	94.5	78.5	117
EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	20 µg/L	91.8	75.7	115
EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	20 µg/L	89.8	76.4	115
EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	20 µg/L	94.2	77.1	118
EP074E: Halogenated Aliphatic Compounds (QCLot: 4183633)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	200 µg/L	90.2	51.9	140
EP074: Chloromethane	74-87-3	50	µg/L	<50	200 µg/L	92.2	63.2	134
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	200 µg/L	97.8	58.1	135
EP074: Bromomethane	74-83-9	50	µg/L	<50	200 µg/L	87.4	54.4	130
EP074: Chloroethane	75-00-3	50	µg/L	<50	200 µg/L	95.1	69.4	129
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	200 µg/L	97.8	70.1	126
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	20 µg/L	99.4	68.4	125
EP074: Iodomethane	74-88-4	5	µg/L	<5	20 µg/L	75.9	30.9	126
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	20 µg/L	97.1	70.8	122
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	20 µg/L	96.6	76.6	121
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	20 µg/L	96.4	79.1	120
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	20 µg/L	98.0	72.5	120
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	20 µg/L	97.1	69.4	120
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	20 µg/L	96.0	67.8	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	20 µg/L	93.2	78.4	120
EP074: Trichloroethene	79-01-6	5	µg/L	<5	20 µg/L	97.3	73.1	120
EP074: Dibromomethane	74-95-3	5	µg/L	<5	20 µg/L	91.9	78.3	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	20 µg/L	96.6	81.1	120
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	20 µg/L	99.2	80.3	120
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	20 µg/L	103	73.1	118
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	20 µg/L	95.9	76.9	111
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	20 µg/L	95.9	70.0	122
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	20 µg/L	90.8	62.4	118
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	20 µg/L	93.8	77.9	128
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	20 µg/L	96.5	78.5	124

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 4183633) - continued								
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	20 µg/L	86.5	68.5	110
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	20 µg/L	87.3	70.7	116
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	20 µg/L	104	60.0	134
EP074F: Halogenated Aromatic Compounds (QCLot: 4183633)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	20 µg/L	98.9	82.6	116
EP074: Bromobenzene	108-86-1	5	µg/L	<5	20 µg/L	93.5	79.3	115
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	20 µg/L	98.1	75.5	116
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	20 µg/L	94.4	75.0	115
EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	20 µg/L	93.3	76.9	116
EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	20 µg/L	94.5	78.4	118
EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	20 µg/L	96.2	82.2	113
EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	20 µg/L	94.1	67.4	124
EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	20 µg/L	96.7	70.4	124
EP074G: Trihalomethanes (QCLot: 4183633)								
EP074: Chloroform	67-66-3	5	µg/L	<5	20 µg/L	96.9	79.6	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	20 µg/L	92.1	76.3	117
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	20 µg/L	93.8	73.5	113
EP074: Bromoform	75-25-2	5	µg/L	<5	20 µg/L	91.2	68.5	113
EP074H: Naphthalene (QCLot: 4183633)								
EP074: Naphthalene	91-20-3	5	µg/L	<5	20 µg/L	91.1	78.0	119
EP075(SIM)A: Phenolic Compounds (QCLot: 4186974)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	35.7	17.8	51.1
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	79.3	43.2	107
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	71.1	39.2	98.7
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	65.4	35.5	91.3
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	83.3	34.4	124
EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	77.4	44.4	112
EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	78.9	45.3	115
EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	80.2	44.3	116
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	80.8	46.6	117
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	90.1	38.2	122
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	93.7	43.2	123
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	60.4	48.1	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4189103)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	36.6	17.8	51.1
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	87.0	43.2	107
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	77.3	39.2	98.7
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	69.8	35.5	91.3

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 4189103) - continued								
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	95.3	34.4	124
EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	84.0	44.4	112
EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	86.3	45.3	115
EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	86.7	44.3	116
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	86.8	46.6	117
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	99.5	38.2	122
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	102	43.2	123
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	88.6	48.1	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4186974)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	80.3	42.8	114
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	92.8	48.6	119
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	95.2	47.0	117
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	97.0	49.5	119
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	88.1	49.4	121
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	87.0	48.4	122
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	89.4	50.3	124
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	89.9	50.0	126
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	87.2	49.4	127
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	88.8	48.7	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	87.3	54.5	134
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	85.8	56.1	134
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	86.4	55.6	135
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	87.7	54.4	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	87.8	54.5	126
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	87.6	54.4	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4189103)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	85.8	42.8	114
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	99.5	48.6	119
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	103	47.0	117
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	103	49.5	119
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	95.7	49.4	121
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	94.0	48.4	122
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	96.6	50.3	124
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	97.2	50.0	126
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	95.2	49.4	127
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	96.8	48.7	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	95.0	54.5	134

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4189103) - continued								
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	93.9	56.1	134
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	94.2	55.6	135
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	95.0	54.4	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	95.2	54.5	126
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	95.5	54.4	126
EP075A: Phenolic Compounds (QCLot: 4183874)								
EP075: Phenol	108-95-2	2	µg/L	<2	10 µg/L	39.9	19.5	48.1
EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	10 µg/L	81.0	46.3	101
EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	10 µg/L	72.4	41.1	94.4
EP075: 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2	10 µg/L	64.3	35.1	88.8
EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	10 µg/L	90.2	45.3	113
EP075: 2.4-Dimethylphenol	105-67-9	2	µg/L	<2	10 µg/L	88.0	47.6	108
EP075: 2.4-Dichlorophenol	120-83-2	2	µg/L	<2	10 µg/L	89.5	48.2	110
EP075: 2.6-Dichlorophenol	87-65-0	2	µg/L	<2	10 µg/L	87.4	48.9	107
EP075: 4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	10 µg/L	85.9	47.2	110
EP075: 2.4.6-Trichlorophenol	88-06-2	2	µg/L	<2	10 µg/L	88.4	45.2	112
EP075: 2.4.5-Trichlorophenol	95-95-4	2	µg/L	<2	10 µg/L	84.2	42.4	113
EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	10 µg/L	85.4	14.2	124
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4183874)								
EP075: Naphthalene	91-20-3	2	µg/L	<2	10 µg/L	86.3	50.9	107
EP075: 2-Methylnaphthalene	91-57-6	2	µg/L	<2	10 µg/L	86.7	50.3	111
EP075: 2-Chloronaphthalene	91-58-7	2	µg/L	<2	10 µg/L	84.8	50.8	110
EP075: Acenaphthylene	208-96-8	2	µg/L	<2	10 µg/L	86.7	52.9	111
EP075: Acenaphthene	83-32-9	2	µg/L	<2	10 µg/L	95.8	54.5	109
EP075: Fluorene	86-73-7	2	µg/L	<2	10 µg/L	102	55.7	110
EP075: Phenanthrene	85-01-8	2	µg/L	<2	10 µg/L	98.2	55.4	112
EP075: Anthracene	120-12-7	2	µg/L	<2	10 µg/L	96.7	55.9	111
EP075: Fluoranthene	206-44-0	2	µg/L	<2	10 µg/L	93.8	55.9	112
EP075: Pyrene	129-00-0	2	µg/L	<2	10 µg/L	99.1	56.5	112
EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	10 µg/L	108	50.0	118
EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	10 µg/L	105	55.5	114
EP075: Chrysene	218-01-9	2	µg/L	<2	10 µg/L	102	56.0	114
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	20 µg/L	97.4	55.4	120
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	10 µg/L	96.6	54.4	121
EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	10 µg/L	98.0	53.9	121
EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	10 µg/L	96.5	51.9	121
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L	<2	10 µg/L	91.8	54.4	114
EP075: Dibenz(a.h)anthracene	53-70-3	2	µg/L	<2	10 µg/L	98.2	54.0	115

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4183874) - continued								
EP075: Benzo(g.h.i)perylene	191-24-2	2	µg/L	<2	10 µg/L	94.9	51.7	116
EP075C: Phthalate Esters (QCLot: 4183874)								
EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	10 µg/L	94.4	56.5	115
EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	10 µg/L	104	58.0	113
EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	10 µg/L	102	57.6	120
EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	10 µg/L	98.2	56.3	119
EP075: bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	10 µg/L	97.6	57.6	122
EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	10 µg/L	89.2	56.5	122
EP075D: Nitrosamines (QCLot: 4183874)								
EP075: N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	10 µg/L	56.6	23.9	106
EP075: N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	10 µg/L	80.3	46.1	108
EP075: N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	10 µg/L	67.8	36.6	83.2
EP075: N-Nitrosomorpholine	59-89-2	2	µg/L	<2	10 µg/L	61.1	34.6	79.0
EP075: N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	10 µg/L	92.8	53.1	114
EP075: N-Nitrosopiperidine	100-75-4	2	µg/L	<2	10 µg/L	92.7	51.0	111
EP075: N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	10 µg/L	86.3	37.0	111
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	10 µg/L	97.4	51.3	113
EP075: Methapyrilene	91-80-5	2	µg/L	<2	10 µg/L	73.2	10.0	125
EP075E: Nitroaromatics and Ketones (QCLot: 4183874)								
EP075: 2-Picoline	109-06-8	2	µg/L	<2	10 µg/L	46.8	18.8	108
EP075: Acetophenone	98-86-2	2	µg/L	<2	10 µg/L	92.4	52.5	111
EP075: Nitrobenzene	98-95-3	2	µg/L	<2	10 µg/L	89.1	50.6	109
EP075: Isophorone	78-59-1	2	µg/L	<2	10 µg/L	89.3	53.7	113
EP075: 2.6-Dinitrotoluene	606-20-2	4	µg/L	<4	10 µg/L	94.7	54.0	115
EP075: 2.4-Dinitrotoluene	121-14-2	4	µg/L	<4	10 µg/L	100.0	53.3	109
EP075: 1-Naphthylamine	134-32-7	2	µg/L	<2	10 µg/L	118	10.9	119
EP075: 4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	10 µg/L	99.7	27.3	147
EP075: 5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	10 µg/L	109	44.6	119
EP075: Azobenzene	103-33-3	2	µg/L	<2	10 µg/L	101	55.6	110
EP075: 1.3.5-Trinitrobenzene	99-35-4	2	µg/L	<2	10 µg/L	103	37.6	124
EP075: Phenacetin	62-44-2	2	µg/L	<2	10 µg/L	95.1	44.8	101
EP075: 4-Aminobiphenyl	92-67-1	2	µg/L	<2	10 µg/L	140	24.0	149
EP075: Pentachloronitrobenzene	82-68-8	2	µg/L	<2	10 µg/L	103	54.6	111
EP075: Pronamide	23950-58-5	2	µg/L	<2	10 µg/L	100	56.5	113
EP075: Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	10 µg/L	97.2	53.8	112
EP075: Chlorobenzilate	510-15-6	2	µg/L	<2	10 µg/L	97.3	55.0	113
EP075F: Haloethers (QCLot: 4183874)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075F: Haloethers (QCLot: 4183874) - continued								
EP075: Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	10 µg/L	86.4	45.3	112
EP075: Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	10 µg/L	93.0	52.7	111
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	10 µg/L	95.8	55.8	110
EP075: 4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	10 µg/L	98.2	55.7	114
EP075G: Chlorinated Hydrocarbons (QCLot: 4183874)								
EP075: 1.4-Dichlorobenzene	106-46-7	2	µg/L	<2	10 µg/L	83.3	43.2	104
EP075: 1.3-Dichlorobenzene	541-73-1	2	µg/L	<2	10 µg/L	84.3	42.7	103
EP075: 1.2-Dichlorobenzene	95-50-1	2	µg/L	<2	10 µg/L	85.2	44.4	104
EP075: Hexachloroethane	67-72-1	2	µg/L	<2	10 µg/L	84.1	41.5	105
EP075: 1.2.4-Trichlorobenzene	120-82-1	2	µg/L	<2	10 µg/L	86.3	46.1	107
EP075: Hexachloropropylene	1888-71-7	2	µg/L	<2	10 µg/L	76.7	41.4	109
EP075: Hexachlorobutadiene	87-68-3	2	µg/L	<2	10 µg/L	79.7	43.9	108
EP075: Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	10 µg/L	69.0	14.6	133
EP075: Pentachlorobenzene	608-93-5	2	µg/L	<2	10 µg/L	94.4	53.3	109
EP075: Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	10 µg/L	98.3	48.4	116
EP075H: Anilines and Benzidines (QCLot: 4183874)								
EP075: Aniline	62-53-3	2	µg/L	<2	10 µg/L	80.7	21.2	116
EP075: 4-Chloroaniline	106-47-8	2	µg/L	<2	10 µg/L	85.4	14.5	126
EP075: 2-Nitroaniline	88-74-4	4	µg/L	<4	10 µg/L	93.8	49.5	111
EP075: 3-Nitroaniline	99-09-2	4	µg/L	<4	10 µg/L	99.0	28.4	125
EP075: Dibenzofuran	132-64-9	2	µg/L	<2	10 µg/L	97.8	55.4	110
EP075: 4-Nitroaniline	100-01-6	2	µg/L	<2	10 µg/L	108	37.3	112
EP075: Carbazole	86-74-8	2	µg/L	<2	10 µg/L	105	51.6	116
EP075: 3.3`-Dichlorobenzidine	91-94-1	2	µg/L	<2	10 µg/L	118	42.3	142
EP075I: Organochlorine Pesticides (QCLot: 4183874)								
EP075: alpha-BHC	319-84-6	2	µg/L	<2	10 µg/L	101	56.2	112
EP075: beta-BHC	319-85-7	2	µg/L	<2	10 µg/L	97.5	56.2	113
EP075: gamma-BHC	58-89-9	2	µg/L	<2	10 µg/L	99.8	55.2	113
EP075: delta-BHC	319-86-8	2	µg/L	<2	10 µg/L	100	52.6	117
EP075: Heptachlor	76-44-8	2	µg/L	<2	10 µg/L	103	53.4	111
EP075: Aldrin	309-00-2	2	µg/L	<2	10 µg/L	90.5	54.0	112
EP075: Heptachlor epoxide	1024-57-3	2	µg/L	<2	10 µg/L	88.3	54.2	113
EP075: alpha-Endosulfan	959-98-8	2	µg/L	<2	10 µg/L	96.4	49.3	122
EP075: 4.4`-DDE	72-55-9	2	µg/L	<2	10 µg/L	97.6	56.0	121
EP075: Dieldrin	60-57-1	2	µg/L	<2	10 µg/L	103	55.2	118
EP075: Endrin	72-20-8	2	µg/L	<2	10 µg/L	102	52.7	121
EP075: beta-Endosulfan	33213-65-9	2	µg/L	<2	10 µg/L	102	55.1	119
EP075: 4.4`-DDD	72-54-8	2	µg/L	<2	10 µg/L	96.6	55.4	120

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075I: Organochlorine Pesticides (QCLot: 4183874) - continued								
EP075: Endosulfan sulfate	1031-07-8	2	µg/L	<2	10 µg/L	102	49.6	123
EP075: 4.4`-DDT	50-29-3	4	µg/L	<4	10 µg/L	99.8	47.8	127
EP075J: Organophosphorus Pesticides (QCLot: 4183874)								
EP075: Dichlorvos	62-73-7	2	µg/L	<2	10 µg/L	91.8	50.1	115
EP075: Dimethoate	60-51-5	2	µg/L	<2	10 µg/L	83.9	40.8	108
EP075: Diazinon	333-41-5	2	µg/L	<2	10 µg/L	106	55.4	118
EP075: Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	10 µg/L	97.0	53.0	118
EP075: Malathion	121-75-5	2	µg/L	<2	10 µg/L	102	54.6	122
EP075: Fenthion	55-38-9	2	µg/L	<2	10 µg/L	102	55.1	119
EP075: Chlorpyrifos	2921-88-2	2	µg/L	<2	10 µg/L	99.7	55.3	118
EP075: Pirimphos-ethyl	23505-41-1	2	µg/L	<2	10 µg/L	96.5	55.8	118
EP075: Chlorfenvinphos	470-90-6	2	µg/L	<2	10 µg/L	115	45.8	118
EP075: Prothiofos	34643-46-4	2	µg/L	<2	10 µg/L	102	56.1	118
EP075: Ethion	563-12-2	2	µg/L	<2	10 µg/L	101	57.7	119
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4191857)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	101	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	99.7	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	93.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	85.4	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	83.8	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4191857)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.3	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.7	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	98.9	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	93.5	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	104	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	99.1	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.9	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	106	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	106	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	112	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4191857)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	93.9	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	115	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	119	70.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4191857) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	114	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	105	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	114	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	99.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4191857)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	96.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	112	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	92.7	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	78.3	70.0	130
EP231P: PFAS Sums (QCLot: 4191857)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4187882)							
EM2201970-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.0	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	90.4	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	98.4	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	94.3	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	94.9	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	93.8	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4187883)							
EM2201970-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	98.1	76.0	116
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4187376)							
EM2202129-002	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	98.3	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4184484)							
EM2202635-010	Anonymous	EP074: Benzene	71-43-2	2 mg/kg	117	51.0	137
		EP074: Toluene	108-88-3	2 mg/kg	94.1	54.0	141
EP074E: Halogenated Aliphatic Compounds (QCLot: 4184484)							
EM2202635-010	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	99.0	29.0	141
		EP074: Trichloroethene	79-01-6	2 mg/kg	88.3	50.0	126
EP074F: Halogenated Aromatic Compounds (QCLot: 4184484)							
EM2202635-010	Anonymous	EP074: Chlorobenzene	108-90-7	2 mg/kg	98.2	65.0	133
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4188533)							
EM2202619-008	HB-BH01-C-2	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	92.4	77.2	116
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	99.4	65.5	136
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4184483)							
EM2202474-002	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	69.5	33.4	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4188534)							
EM2202758-001	Anonymous	EP071: C10 - C14 Fraction	----	760 mg/kg	106	71.2	125
		EP071: C15 - C28 Fraction	----	3270 mg/kg	108	75.6	122
		EP071: C29 - C36 Fraction	----	1550 mg/kg	110	78.0	120
		EP071: C10 - C36 Fraction (sum)	----	5580 mg/kg	108	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4184483)							
EM2202474-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	66.8	30.8	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4188534)							
EM2202758-001	Anonymous	EP071: >C10 - C16 Fraction	----	1110 mg/kg	102	72.2	128
		EP071: >C16 - C34 Fraction	----	4180 mg/kg	109	76.5	119
		EP071: >C34 - C40 Fraction	----	290 mg/kg	120	66.8	138
		EP071: >C10 - C40 Fraction (sum)	----	5580 mg/kg	109	70.0	130
EP080: BTEXN (QCLot: 4184483)							
EM2202474-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	75.9	54.4	127
		EP080: Toluene	108-88-3	2 mg/kg	81.6	57.1	131
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4190410)							
EM2202595-048	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	97.4	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	93.6	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	103	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	114	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	95.4	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	108	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4190410)							
EM2202595-048	Anonymous						

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4190410) - continued							
EM2202595-048	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	93.8	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	101	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	94.1	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	97.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	102	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	100	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	94.3	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	115	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	101	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	100	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	100	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4190410)							
EM2202595-048	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	106	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	111	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	96.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	111	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	106	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	106	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4190410)							
EM2202595-048	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	88.7	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	99.2	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	# 55.7	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 4191025)							
EM2202502-004	Anonymous	EG005C: Arsenic	7440-38-2	1 mg/L	102	80.0	120
		EG005C: Barium	7440-39-3	1 mg/L	86.0	80.0	120
		EG005C: Beryllium	7440-41-7	1 mg/L	108	80.0	120
		EG005C: Cadmium	7440-43-9	0.25 mg/L	102	80.0	120
		EG005C: Chromium	7440-47-3	1 mg/L	95.5	80.0	120

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 4191025) - continued							
EM2202502-004	Anonymous	EG005C: Cobalt	7440-48-4	1 mg/L	97.5	80.0	120
		EG005C: Copper	7440-50-8	1 mg/L	97.5	80.0	120
		EG005C: Lead	7439-92-1	1 mg/L	103	80.0	120
		EG005C: Nickel	7440-02-0	1 mg/L	98.0	80.0	120
		EG005C: Vanadium	7440-62-2	1 mg/L	94.1	80.0	120
		EG005C: Zinc	7440-66-6	1 mg/L	104	80.0	120
EG020F: Dissolved Metals by ICP-MS (QCLot: 4189968)							
EM2202619-001	HB-BH01-C	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	109	76.6	124
		EG020A-F: Beryllium	7440-41-7	0.2 mg/L	99.4	73.0	120
		EG020A-F: Barium	7440-39-3	0.2 mg/L	106	75.0	127
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	117	74.6	118
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	106	71.0	135
		EG020A-F: Cobalt	7440-48-4	0.2 mg/L	110	78.0	132
		EG020A-F: Copper	7440-50-8	0.2 mg/L	110	76.0	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	106	75.0	133
		EG020A-F: Manganese	7439-96-5	0.2 mg/L	98.1	64.0	134
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	109	73.0	131
		EG020A-F: Vanadium	7440-62-2	0.2 mg/L	106	73.0	131
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	115	75.0	131
EG035C: Leachable Mercury by FIMS (QCLot: 4194918)							
EM2202619-021	HB-BH01-C-0.1	EG035C: Mercury	7439-97-6	0.01 mg/L	95.9	84.0	118
EG035F: Dissolved Mercury by FIMS (QCLot: 4189970)							
EM2202619-002	HB-BH02-C	EG035F: Mercury	7439-97-6	0.01 mg/L	93.0	70.0	120
EK025SF: Free CN by Segmented Flow Analyser (QCLot: 4189735)							
EM2202847-003	Anonymous	EK025SF: Free Cyanide	----	0.2 mg/L	102	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4189736)							
EM2202619-002	HB-BH02-C	EK026SF: Total Cyanide	57-12-5	0.2 mg/L	96.7	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4195680)							
EM2202619-021	HB-BH01-C-0.1	EK026SF: Total Cyanide	57-12-5	0.2 mg/L	82.5	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 4184793)							
EM2202557-022	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	116	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 4185511)							
EM2202614-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	111	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4184236)							
EM2202619-002	HB-BH02-C	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	92.7	80.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4184794)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4184794) - continued							
EM2202557-022	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	# Not Determined	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4185512)							
EM2202614-002	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	105	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 4186568)							
EM2202606-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	89.0	70.0	130
EK085M: Sulfide as S2- (QCLot: 4185330)							
EM2202619-002	HB-BH02-C	EK085: Sulfide as S2-	18496-25-8	0.33 mg/L	# 23.8	70.0	130
EP071: Total Petroleum Hydrocarbons (QCLot: 4183875)							
EM2202619-009	Rinsate Gloves	EP071-SV: C10 - C14 Fraction	----	4000 µg/L	87.0	48.0	126
		EP071-SV: C15 - C28 Fraction	----	16900 µg/L	89.3	51.7	132
		EP071-SV: C29 - C36 Fraction	----	8090 µg/L	87.4	50.5	127
		EP071-SV: C10 - C36 Fraction (sum)	----	28990 µg/L	87.1	50.2	129
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4183875)							
EM2202619-009	Rinsate Gloves	EP071-SV: >C10 - C16 Fraction	----	5830 µg/L	90.7	48.0	128
		EP071-SV: >C16 - C34 Fraction	----	21700 µg/L	88.6	50.4	130
		EP071-SV: >C34 - C40 Fraction	----	1560 µg/L	81.7	47.4	131
		EP071-SV: >C10 - C40 Fraction (sum)	----	29090 µg/L	87.4	50.0	128
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4183633)							
EM2202593-001	Anonymous	EP074: Benzene	71-43-2	20 µg/L	113	56.1	141
		EP074: Toluene	108-88-3	20 µg/L	115	55.9	132
EP074E: Halogenated Aliphatic Compounds (QCLot: 4183633)							
EM2202593-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	20 µg/L	128	33.0	150
		EP074: Trichloroethene	79-01-6	20 µg/L	118	51.4	124
EP074F: Halogenated Aromatic Compounds (QCLot: 4183633)							
EM2202593-001	Anonymous	EP074: Chlorobenzene	108-90-7	20 µg/L	120	63.6	128

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2202619**	Page	: 1 of 24
Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Telephone	: +6138549 9645
Project	: IS360318	Date Samples Received	: 17-Feb-2022
Site	: ----	Issue Date	: 25-Feb-2022
Sampler	: AV	No. of samples received	: 19
Order number	: ----	No. of samples analysed	: 18

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Duplicate outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EP080/071: Total Petroleum Hydrocarbons	EM2202619--006	HB-BH01-C-0.1	**C10 - C36 Fraction (sum)**	----	22.2 %	0% - 20%	**RPD exceeds LOR based limits**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	EM2202619--006	HB-BH01-C-0.1	**>C10 - C40 Fraction (sum)**	----	24.7 %	0% - 20%	**RPD exceeds LOR based limits**
Matrix Spike (MS) Recoveries							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2202595--048	Anonymous	**10:2 Fluorotelomer sulfonic acid (10:2 FTS)**	120226-60-0	55.7 %	70.0-130%	**Recovery less than lower data quality objective**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Ar	EM2202557--022	Anonymous	**Nitrite + Nitrate as N**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EK085M: Sulfide as S2-	EM2202619--002	HB-BH02-C	**Sulfide as S2-**	18496-25-8	23.8 %	70.0-130%	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / **Container** / Client Sample ID(s)	*Extraction / Preparation*			*Analysis*		
	Date extracted	*Due for extraction*	***Days overdue***	*Date analysed*	*Due for analysis*	***Days overdue***
EA001: pH in soil using 0.01M CaCl extract						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	----	----	----
EA010: Conductivity (1:5)						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-0.5, HB-BH01-C-2	----	----	----	21-Feb-2022	18-Feb-2022	**3**
EK026SF: Total CN by Segmented Flow Analyser						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	**4**	----	----	----
EN33: TCLP Leach - Inorganics/Non-Volatile Organics (Glass Vessel)						
Non-Volatile Leach: 14 day HT(e.g. SV organics)						
HB-BH01-C-0.1	21-Feb-2022	18-Feb-2022	**3**	----	----	----
EN33Z: ZHE TCLP Leach						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EN33Z: ZHE TCLP Leach - Analysis Holding Time Compliance						
ZHE Leach: 14 day HT(e.g. CN, BTEX)						
HB-BH01-C-0.1	24-Feb-2022	18-Feb-2022	**6**	----	----	----
EN60: ASLP Leaching Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)						
Non-Volatile Leach: 14 day HT(e.g. SV organics)						
HB-BH01-C-0.1	21-Feb-2022	18-Feb-2022	**3**	----	----	----
EN60Z: ASLP Leachate - ZHE						
ZHE Leach: 14 day HT(e.g. CN, BTEX)						
HB-BH01-C-0.1	24-Feb-2022	18-Feb-2022	**6**	----	----	----
EP066: Polychlorinated Biphenyls (PCB)						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	**4**	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP074B: Oxygenated Compounds						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP074C: Sulfonated Compounds						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP074D: Fumigants						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP074E: Halogenated Aliphatic Compounds						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP074F: Halogenated Aromatic Compounds						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP074G: Trihalomethanes						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	21-Feb-2022	11-Feb-2022	**10**	22-Feb-2022	11-Feb-2022	**11**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-2	22-Feb-2022	18-Feb-2022	**4**	----	----	----
EP075A: Phenolic Compounds						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	**4**	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP075B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075C: Phthalate Esters						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075D: Nitrosamines						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075E: Nitroaromatics and Ketones						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075F: Haloethers						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075G: Chlorinated Hydrocarbons						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075H: Anilines and Benzidines						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075I: Organochlorine Pesticides						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP075J: Organophosphorus Pesticides						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.5	22-Feb-2022	18-Feb-2022	4	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-2	22-Feb-2022	18-Feb-2022	4	22-Feb-2022	18-Feb-2022	4
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-2	22-Feb-2022	18-Feb-2022	4	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-2	22-Feb-2022	18-Feb-2022	4	22-Feb-2022	18-Feb-2022	4
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-2	22-Feb-2022	18-Feb-2022	4	----	----	----
EP080: BTEXN						
Soil Glass Jar - Unpreserved						
HB-BH01-C-0.1, HB-BH01-C-2	22-Feb-2022	18-Feb-2022	4	22-Feb-2022	18-Feb-2022	4

Matrix: **WATER**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EK057G: Nitrite as N by Discrete Analyser							
Amber Glass Bottle - Unpreserved							
HB-BH02-C, HB-BH06-C	HB-BH03-C,	----	----	----	21-Feb-2022	17-Feb-2022	**4**
Clear Plastic Bottle - Natural							
HB-BH01-C		----	----	----	21-Feb-2022	17-Feb-2022	**4**
EP071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved							
Rinsate Trowel, Rinsate Auger	Rinsate Gloves,	21-Feb-2022	15-Feb-2022	**6**	----	----	----
Amber Glass Bottle - Unpreserved							
Rinsate Gloves,	Rinsate Trowel	21-Feb-2022	17-Feb-2022	**4**	----	----	----
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved							
Rinsate Trowel, Rinsate Auger	Rinsate Gloves,	21-Feb-2022	15-Feb-2022	**6**	----	----	----
Amber Glass Bottle - Unpreserved							
Rinsate Gloves,	Rinsate Trowel	21-Feb-2022	17-Feb-2022	**4**	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Matrix Spikes (MS)					
Chloride Soluble By Discrete Analyser	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	0	7	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**21-Feb-2022**	21-Feb-2022	✓
EA010: Conductivity (1:5)							
Soil Glass Jar - Unpreserved (EA010)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**21-Feb-2022**	21-Mar-2022	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
HB-BH01-C-0.1, HB-BH01-C-0.5, HB-BH01-C-2	**04-Feb-2022**	**----**	----	----	**21-Feb-2022**	18-Feb-2022	×
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200)							
HB-BH01-C-0.1, HB-BH01-C-0.5	**04-Feb-2022**	**----**	----	----	**21-Feb-2022**	03-Aug-2022	✓
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200)							
QC01	**04-Feb-2022**	**----**	----	----	**24-Feb-2022**	03-Aug-2022	✓
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)							
Soil Glass Jar - Unpreserved (ED040N)							
HB-BH01-C-0.5	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**25-Feb-2022**	03-Aug-2022	✓
ED045G: Chloride by Discrete Analyser							
Soil Glass Jar - Unpreserved (ED045G)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	04-Mar-2022	✓	**22-Feb-2022**	21-Mar-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
HB-BH01-C-0.1, HB-BH01-C-2	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**24-Feb-2022**	03-Aug-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
HB-BH01-C-0.1, HB-BH01-C-2	**04-Feb-2022**	**24-Feb-2022**	04-Mar-2022	✓	**24-Feb-2022**	04-Mar-2022	✓
EK026SF: Total CN by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EK026SF)							
HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	08-Mar-2022	✓
EN33: TCLP Leach - Inorganics/Non-Volatile Organics (Glass Vessel)							
Non-Volatile Leach: 14 day HT(e.g. SV organics) (EN33a-G)							
HB-BH01-C-0.1	**04-Feb-2022**	**21-Feb-2022**	18-Feb-2022	×	**----**	----	----

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EN33Z: ZHE TCLP Leach							
ZHE Leach: 14 day HT(e.g. CN, BTEX) (EN33Za)							
HB-BH01-C-0.1	**04-Feb-2022**	**24-Feb-2022**	18-Feb-2022	×	**----**	----	----
EN60: ASLP Leaching Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)							
Non-Volatile Leach: 14 day HT(e.g. SV organics) (EN60a-G)							
HB-BH01-C-0.1	**04-Feb-2022**	**21-Feb-2022**	18-Feb-2022	×	**----**	----	----
EN60Z: ASLP Leachate - ZHE							
ZHE Leach: 14 day HT(e.g. CN, BTEX) (EN60Za)							
HB-BH01-C-0.1	**04-Feb-2022**	**24-Feb-2022**	18-Feb-2022	×	**----**	----	----
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074)							
HB-BH01-C-0.5	**04-Feb-2022**	**21-Feb-2022**	11-Feb-2022	×	**22-Feb-2022**	11-Feb-2022	×
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
HB-BH01-C-0.1, HB-BH01-C-2	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075)							
HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075F: Haloethers							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved (EP075) HB-BH01-C-0.5	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) HB-BH01-C-0.1	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH01-C-0.1	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**22-Feb-2022**	18-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH01-C-2	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH01-C-2	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**22-Feb-2022**	18-Feb-2022	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071) HB-BH01-C-0.1	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH01-C-0.1	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**22-Feb-2022**	18-Feb-2022	×
Soil Glass Jar - Unpreserved (EP071) HB-BH01-C-2	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**23-Feb-2022**	03-Apr-2022	✓
Soil Glass Jar - Unpreserved (EP080) HB-BH01-C-2	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**22-Feb-2022**	18-Feb-2022	×
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) HB-BH01-C-0.1, HB-BH01-C-2	**04-Feb-2022**	**22-Feb-2022**	18-Feb-2022	×	**22-Feb-2022**	18-Feb-2022	×
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) HB-BH01-C-0.5	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**24-Feb-2022**	05-Apr-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) HB-BH01-C-0.5	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**24-Feb-2022**	05-Apr-2022	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) HB-BH01-C-0.5	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**24-Feb-2022**	05-Apr-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) HB-BH01-C-0.5	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**24-Feb-2022**	05-Apr-2022	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) HB-BH01-C-0.5	**04-Feb-2022**	**24-Feb-2022**	03-Aug-2022	✓	**24-Feb-2022**	05-Apr-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA010P: Conductivity by PC Titrator							
Amber Glass Bottle - Unpreserved (EA010-P) HB-BH02-C, HB-BH03-C, HB-BH06-C	**15-Feb-2022**	**----**	----	----	**22-Feb-2022**	15-Mar-2022	✓
Clear Plastic Bottle - Natural (EA010-P) HB-BH01-C	**15-Feb-2022**	**----**	----	----	**22-Feb-2022**	15-Mar-2022	✓
EA015: Total Dissolved Solids dried at 180 ± 5 °C							
Amber Glass Bottle - Unpreserved (EA015H) HB-BH02-C, HB-BH03-C, HB-BH06-C	**15-Feb-2022**	**----**	----	----	**22-Feb-2022**	22-Feb-2022	✓
Clear Plastic Bottle - Natural (EA015H) HB-BH01-C	**15-Feb-2022**	**----**	----	----	**22-Feb-2022**	22-Feb-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)C: Leachable Metals by ICPAES							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C)							
HB-BH01-C-0.1, HB-BH01-C-0.1	**21-Feb-2022**	**24-Feb-2022**	20-Aug-2022	✓	**24-Feb-2022**	20-Aug-2022	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Filtered; Lab-acidified (EG020B-F)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, QC_01	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	14-Aug-2022	✓
Clear Plastic Bottle - Unfiltered; Lab-acidified (EG020B-F)							
HB-BH06-C (s)	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	14-Aug-2022	✓
EG035C: Leachable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035C)							
HB-BH01-C-0.1, HB-BH01-C-0.1	**21-Feb-2022**	**----**	----	----	**25-Feb-2022**	21-Mar-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Filtered; Lab-acidified (EG035F)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, QC_01	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	15-Mar-2022	✓
Clear Plastic Bottle - Unfiltered; Lab-acidified (EG035F)							
HB-BH06-C (s)	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	01-Mar-2022	✓
EK025SF: Free CN by Segmented Flow Analyser							
Opaque plastic bottle - NaOH (EK025SF)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, QC_01	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	01-Mar-2022	✓
EK026SF: Total CN by Segmented Flow Analyser							
Opaque plastic bottle - NaOH (EK026SF)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, QC_01	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	01-Mar-2022	✓
Opaque plastic bottle - NaOH (EK026SF)							
HB-BH01-C-0.1, HB-BH01-C-0.1	**24-Feb-2022**	**----**	----	----	**25-Feb-2022**	10-Mar-2022	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	15-Mar-2022	✓
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
HB-BH06-C (s)	**15-Feb-2022**	**----**	----	----	**25-Feb-2022**	15-Mar-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK057G: Nitrite as N by Discrete Analyser							
Amber Glass Bottle - Unpreserved (EK057G)							
HB-BH02-C, HB-BH03-C, HB-BH06-C	**15-Feb-2022**	**----**	----	----	**21-Feb-2022**	17-Feb-2022	×
Clear Plastic Bottle - Natural (EK057G)							
HB-BH01-C	**15-Feb-2022**	**----**	----	----	**21-Feb-2022**	17-Feb-2022	×
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C	**15-Feb-2022**	**----**	----	----	**22-Feb-2022**	15-Mar-2022	✓
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
HB-BH06-C (s)	**15-Feb-2022**	**----**	----	----	**23-Feb-2022**	15-Mar-2022	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s)	**15-Feb-2022**	**22-Feb-2022**	15-Mar-2022	✓	**23-Feb-2022**	15-Mar-2022	✓
EK085M: Sulfide as S2-							
Clear Plastic Bottle - Zinc Acetate/NaOH (EK085)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, QC_01	**15-Feb-2022**	**----**	----	----	**21-Feb-2022**	22-Feb-2022	✓
EP066: Polychlorinated Biphenyls (PCB)							
Amber Glass Bottle - Unpreserved (EP066)							
HB-BH01-C-0.1	**21-Feb-2022**	**22-Feb-2022**	28-Feb-2022	✓	**22-Feb-2022**	03-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP066)							
HB-BH01-C-0.1	**21-Feb-2022**	**23-Feb-2022**	28-Feb-2022	✓	**23-Feb-2022**	04-Apr-2022	✓
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068)							
HB-BH01-C-0.1	**21-Feb-2022**	**22-Feb-2022**	28-Feb-2022	✓	**22-Feb-2022**	03-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP068)							
HB-BH01-C-0.1	**21-Feb-2022**	**23-Feb-2022**	28-Feb-2022	✓	**23-Feb-2022**	04-Apr-2022	✓
EP071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071-SV)							
Rinsate Trowel, Rinsate Gloves, Rinsate Auger	**08-Feb-2022**	**21-Feb-2022**	15-Feb-2022	×	**22-Feb-2022**	02-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP071-SV)							
Rinsate Gloves, Rinsate Trowel	**10-Feb-2022**	**21-Feb-2022**	17-Feb-2022	×	**22-Feb-2022**	02-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP071-SV)							
Rinsate 1 Glove	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071-SV) Rinsate Trowel, Rinsate Gloves, Rinsate Auger	**08-Feb-2022**	**21-Feb-2022**	15-Feb-2022	×	**22-Feb-2022**	02-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP071-SV) Rinsate Gloves, Rinsate Trowel	**10-Feb-2022**	**21-Feb-2022**	17-Feb-2022	×	**22-Feb-2022**	02-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP071-SV) Rinsate 1 Glove	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP074) Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074) HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓
EP074B: Oxygenated Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074) HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓
EP074C: Sulfonated Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074) HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓
EP074D: Fumigants							
Amber VOC Vial - Sulfuric Acid (EP074) Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074) HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074) HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074F: Halogenated Aromatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074)							
Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓
EP074G: Trihalomethanes							
Amber VOC Vial - Sulfuric Acid (EP074)							
Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
Amber VOC Vial - Sulfuric Acid (EP074)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**19-Feb-2022**	01-Mar-2022	✓	**19-Feb-2022**	01-Mar-2022	✓
EP074H: Naphthalene							
Amber VOC Vial - Sulfuric Acid (EP074)							
Rinsate Auger	**10-Feb-2022**	**19-Feb-2022**	24-Feb-2022	✓	**19-Feb-2022**	24-Feb-2022	✓
EP075(SIM)A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
HB-BH01-C-0.1	**21-Feb-2022**	**22-Feb-2022**	28-Feb-2022	✓	**22-Feb-2022**	03-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP075(SIM))							
HB-BH01-C-0.1	**21-Feb-2022**	**23-Feb-2022**	28-Feb-2022	✓	**23-Feb-2022**	04-Apr-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
HB-BH01-C-0.1	**21-Feb-2022**	**22-Feb-2022**	28-Feb-2022	✓	**22-Feb-2022**	03-Apr-2022	✓
Amber Glass Bottle - Unpreserved (EP075(SIM))							
HB-BH01-C-0.1	**21-Feb-2022**	**23-Feb-2022**	28-Feb-2022	✓	**23-Feb-2022**	04-Apr-2022	✓
EP075A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075C: Phthalate Esters							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075D: Nitrosamines							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075E: Nitroaromatics and Ketones							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075F: Haloethers							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075G: Chlorinated Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075H: Anilines and Benzidines							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP075I: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075J: Organophosphorus Pesticides							
Amber Glass Bottle - Unpreserved (EP075)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove, QC_01	**15-Feb-2022**	**21-Feb-2022**	22-Feb-2022	✓	**22-Feb-2022**	02-Apr-2022	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**24-Feb-2022**	14-Aug-2022	✓	**24-Feb-2022**	14-Aug-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**24-Feb-2022**	14-Aug-2022	✓	**24-Feb-2022**	14-Aug-2022	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**24-Feb-2022**	14-Aug-2022	✓	**24-Feb-2022**	14-Aug-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**24-Feb-2022**	14-Aug-2022	✓	**24-Feb-2022**	14-Aug-2022	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
HB-BH01-C, HB-BH02-C, HB-BH03-C, HB-BH06-C, HB-BH06-C (s), Rinsate 1 Glove	**15-Feb-2022**	**24-Feb-2022**	14-Aug-2022	✓	**24-Feb-2022**	14-Aug-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Chloride Soluble By Discrete Analyser	ED045G	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Chloride Soluble By Discrete Analyser	ED045G	2	1	**200.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
ASLP for Volatile Analytes (Zero Headspace Extraction)	EN60Za	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride Soluble By Discrete Analyser	ED045G	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Ammonia as N by Discrete analyser	EK055G	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	2	6	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Mercury by FIMS	EG035C	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Metals by ICPAES	EG005C	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	18	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP) - Continued							
Polychlorinated Biphenyls (PCB)	EP066	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfide as S2-	EK085	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	3	22	**13.64**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	42	**11.90**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Ammonia as N by Discrete analyser	EK055G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Mercury by FIMS	EG035C	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Metals by ICPAES	EG005C	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	2	2	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	2	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	2	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfide as S2-	EK085	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	22	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	42	**11.90**	**7.50**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Mercury by FIMS	EG035C	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Metals by ICPAES	EG005C	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Nitrite as N by Discrete Analyser	EK057G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	2	2	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	2	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	2	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfide as S2-	EK085	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	22	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	3	42	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Mercury by FIMS	EG035C	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Leachable Metals by ICPAES	EG005C	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	18	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	0	7	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Sulfide as S2-	EK085	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	22	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl2 extract	EA001	SOIL	In house: Referenced to Rayment and Lyons 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Electrical Conductivity (1:5)	EA010	SOIL	In house: Referenced to Rayment and Lyons 3A1 and APHA 2510. Conductivity is determined on soil samples using a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Resistivity (1:5)	EA080	SOIL	In house: Calculated from Electrical Conductivity
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Sulfate - Calcium Phosphate Soluble	ED040N	SOIL	In house: The sample is extracted with a calcium phosphate solution. The phosphate ion displaces the adsorbed sulfate while calcium ions depress the extraction of interfering S from soil organic matter. SO4 in the extract is determined by ICPAES and reported as dry weight in the original soil. This method is compliant with NEPM Schedule B(3).
Chloride Soluble By Discrete Analyser	ED045G	SOIL	In house: Referenced to APHA 4500-Cl- E. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm. Analysis is performed on a 1:5 soil / water leachate.
Leachable Metals by ICPAES	EG005C	SOIL	In house: referenced to APHA 3120; USEPA SW 846 - 6010: The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Leachable Mercury by FIMS	EG035C	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the TCLP solution. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	In house: Referenced to APHA 4500-CN C&O / ASTM D7511 / ISO 14403. Sodium hydroxide preserved samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Semivolatile Organic Compounds	EP075	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Conductivity by PC Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of `filterable` residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Resistivity	EA080	WATER	In house: Calculation from Electrical conductance
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Metals by ICP-MS - Suite B	EG020B-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Free CN by Segmented Flow Analyser	EK025SF	WATER	In house: Referenced to ASTM D7237, APHA 4500-CN-C&O and ISO 14403: Using an automated segmented flow analyser, a sample at high pH (sodium hydroxide preserved) is buffered to pH 6.0. The hydrogen cyanide present passes across a gas dialysis membrane into an acceptor stream consisting of 0.01 M sodium hydroxide. The acceptor stream mixes with a buffer at pH 5.2 and reacts with chloramine-T to form cyanogen chloride. Cyanogen chloride reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour, measured at 600nm. This method is compliant with NEPM Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	WATER	In house: Referenced to APHA 4500-CN C&O / ASTM D7511 / ISO 14403. Sodium hydroxide preserved samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM Schedule B(3)
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Sulfide as S2-	EK085	WATER	In house: Referenced to APHA 4500-S2- D. Sulfide species present in water samples are immediately precipitated when collected in pretreated caustic/zinc acetate preserved sample containers. The sulphides are coloured using methylene blue indicator. Non-detects may be screened by comparison against a standard at half-LOR, otherwise samples are measured using UV-VIS detection at 664nm. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fractions Only	EP071-SV	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
Semivolatile Organic Compounds	EP075	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
pH in soil using a 0.01M CaCl2 extract	EA001-PR	SOIL	In house: Referenced to Rayment and Lyons 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Calcium Phosphate Extraction for Sulphate as SO4 2-	ED040NPR	SOIL	The sample is extracted with a calcium phosphate solution. The phosphate ion displaces the adsorbed sulphate while calcium ions depress the extraction of interfering S from soil organic matter. SO4 in the extract is determined by ICPAES and reported as dry weight in the original soil. This method is compliant with NEPM Schedule B(3).
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
TCLP for Non & Semivolatile Analytes - Glass Leaching Vessel	EN33a-G	SOIL	In house QWI-EN/33 referenced to USEPA SW846-1311: The TCLP procedure is designed to determine the mobility of both organic and inorganic analytes present in wastes. The standard TCLP leach is for non-volatile and Semivolatile test parameters.

Preparation Methods	Method	Matrix	Method Descriptions
TCLP for Volatile Analytes (Zero Headspace Extraction)	EN33Za	SOIL	In house QWI-EN/33 referenced to USEPA SW846-1311: ZHE (Toxicity Characteristic Leach Procedure - Zero Headspace Extraction) An extraction procedure to determine the mobility of volatile organic and inorganic analytes under specific conditions. This technique is compliant with NEPM Schedule B(3).
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
ASLP for Non & Semivolatile Analytes - Glass Leaching Vessel	EN60a-G	SOIL	In house QWI-EN/60 referenced to AS4439.3 Preparation of Leachates
ASLP for Volatile Analytes (Zero Headspace Extraction)	EN60Za	SOIL	In house QWI-EN/60 referenced to AS4439.2 Preparation of Leachates
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Separatory Funnel Extraction of Liquids	ORG14	SOIL	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
QuECheRS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

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PRIORITY

CLIENT: JACOBS	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)
OFFICE: MELB			Custody Seal Intact? Yes No N/A
PROJECT: HEYBRIDGE PROJECT NO.:	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: IS360318 PURCHASE ORDER NO.:	COUNTRY OF ORIGIN:	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: AV CONTACT PH:		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: AV / MSN SAMPLER MOBILE:	RELINQUISHED BY: AV	RECEIVED BY:	RELINQUISHED BY: RECEIVED BY:
COC Emailed to ALS? (YES / NO) EDD FORMAT (or default):	DATE/TIME: 17/2	DATE/TIME:	DATE/TIME: DATE/TIME:
Email Reports to: [redacted]			
Email Invoice to:			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S-3; S-7 (NEPM Suite 1; Metals (TRH (C6-C40) / BTEX / PAH)	S-13; S-23; EP231 (OC / OP Pesticides / PCB); (VOC / SVOC / PFAS – short Suite (12 analytes))	COR-7 (pH (1:5), Soluble Sulfate, Soluble Chloride)	P-22 (Fe, CEC, pH(CaCl2), TOC, Clay Content + pH(1:5), EC(1:5))	EN33 (TCLP (non-volatile))	EA003 (pHF and pHFOX)	EA200 (ACM presence absence)	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	HB-BH01-C	15/02/22	W	P, SP, AP, SH, VS, AG	11									
2	HB-BH02-C	15/02/22	W	11	11									
3	HB-BH03-C	15/02/22	W	11	11									
4	HB-BH06-C	15/02/22	W	11	11									
5	HB-BH06-C(S)	15/02/22	W	AP, AG, VS, SH	7									
6	HB-BH01-C-0.1	4/2/22	S	B, Jar	4									
7	HB-BH01-C-0.5	4/2/22	S	B, Jar	3									
8	HB-BH01-C-2	4/2/22	S	Jar	1									
9	Rinsate Gloves	10/2/22	W	AG, ~~VS~~	2									
10	Rinsate Trowle	10/2/22	W	AG	1									
11	Rinsate Auger	10/2/22	W	VS	1									
12	Rinsate; Trowl Glove Auger	08/2/22	W	AG	3									
				TOTAL	66									

Environmental Division Melbourne
Work Order Reference
EM2202619

Telephone : 03-8549 9600

Received: 17/2, 10:08 Carrier: TasFast
889472
475

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpreserved; DGP=Dust gauge Preserved

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CLIENT: JACOBS	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)
OFFICE: MELB			Custody Seal Intact? Yes No N/A
PROJECT: HEYBRIDGE PROJECT NO.:	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: IS360318 PURCHASE ORDER NO.:	COUNTRY OF ORIGIN:	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: AV CONTACT PH:		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: MW/AV SAMPLER MOBILE:	RELINQUISHED BY: AV	RECEIVED BY:	RELINQUISHED BY: RECEIVED BY:
COC Emailed to ALS? (YES) (NO) EDD FORMAT (or default):			
Email Reports to: [redacted]	DATE/TIME: 17/2	DATE/TIME:	DATE/TIME: DATE/TIME:
Email Invoice to:			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S-3; S-7 (NEPM Suite 15 Metals), (TRH (C6-C40) / BTEXN / PAH)	S-13; S-23 & P231 (OC / OP Pesticides / PCB), (VOC / SVOC); (PFAS Short Suite (12 analytes)	CORR-7 (pH (1:5), Soluble Sulfate, Soluble Chloride)	P-22 (Fe, CEC, pH($CaCl_2$), TOC, Clay Content + pH(1:5), EC(1:5))	EN33 (TCLP (non-volatile))	EA003 (pHF and pHFOX)	EA200 (ACM presence absence)	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
13	Rinsate 1 Glove	15/02/22	W	AG, VS P, AP	8									
14	QC_01	15/02/22	W	AG, AP, S	4									E COC
15	QC_02	15/02/22		AG, AP, S	3									
16	Trip Blank		S	Jar	3									
17	QC01	4/02/22	S	ST	1									
18	QC02	4/02/22		ST	1									
7					~~2~~									
8														
9														
10														
11														
12														
				TOTAL	20									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpresreved;DGP=Dust gauge Preserved

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CLIENT: Jacobs	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	✱ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)
OFFICE: Melbourne			Custody Seal Intact? Yes No N/A
PROJECT: Heybridge PROJECT NO: IS360318	ALS QUOTE NO.: ME/030/22	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PURCHASE ORDER NO. TBC	COUNTRY OF ORIGIN:	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt °C
PROJECT MANAGER: AV CONTACT PH: 0412 026 499		OF: 1 2 3 4 5 6 7	Other comment:

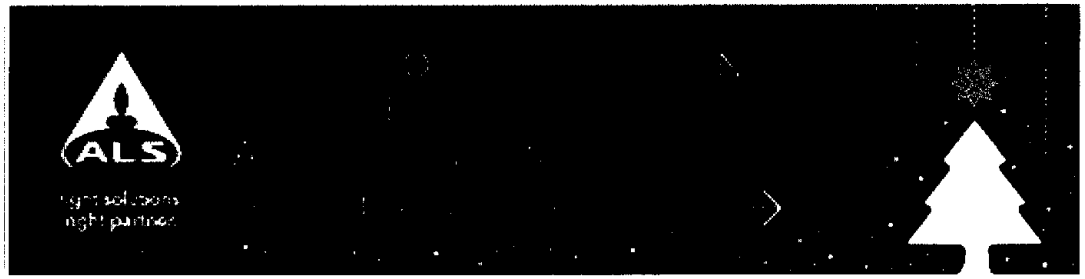
SAMPLER: AV	SAMPLER MOBILE: 0412026499	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC Emailed to ALS? (YES / NO)	EDD FORMAT (or default):			
Email Reports to: antony.volcich@jacobs.com		DATE/TIME: Antony Volcich 12:30pm 17/02/22	DATE/TIME:	DATE/TIME: / DATE/TIME:
Email Invoice to: antony.volcich@jacobs.com				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS (MATRIX: Solid(S) Water(W))			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) (Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required))								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	metals (As, B, Sa, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Se, Tl, V, Zn, Hg) and hydrocarbon compounds (TRH, BTEX, PAH)	(ph, chloride, sulfate, electrical conductivity and resistivity)	total cyanide, (VOCs), (SVOCs), (PFAS), (OCP), s (PCB) and total phenols.	pH, cation exchange capacity and %clay	leachable (TCLP/ASLP) metals , (PAH), OCP, PCB, total phenol and total cyanide	laboratory pH and oxidised pH, SOPCAS	asbestos	pH, Total Dissolved Solids (TDS), major cations and anions, ammonia, nitrite, nitrate, total nitrogen, total cyanide, free cyanide, sulfide, sulfate, chloride, Phosphate, Al, B, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Tl, V, Zn), VOCs, SVOCs, PFAS and conductivity (incl. electrical conductivity and resistivity).	
1	HB-BH01-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
2	HB-BH02-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
3	HB-BH03-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
4	HB-BH06-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
5	HB-BH06-C (s)	15/02/2022	W	AP,AG,VS,SH	7								X	Not enough sample volume for complete analysis
6	HB-BH01-C-0.1	4/02/2022	Soil	B,Jar	4	X				X		X		
7	HB-BH01-C-0.5	4/02/2022	Soil	B,Jar	3		X	X				X		
8	HB-BH01-C-2.02	4/02/2022	Soil	Jar	1	X								
9	Rinsate Gloves	10/02/2022	w	AG	2	X								TRH
10	Rinsate Trowel	10/02/2022	w	AG	1	X								TRH
11	Rinsate Auger	10/02/2022	w	VS	1	X								SVOC,VOC
12	Rinsate Trowel	8/02/2022	w	AG	1	X								TRH
13	Rinsate Gloves	8/02/2022	w	AG	1	X								TRH
14	Rinsate Auger	8/02/2022	w	AG	1	X								TRH
15	Rinsate 1 Glove	15/02/2022	w	AG,VS,P,AP	8	X		X						TRH, PFAS,SVOC,VOC
16	QC_01	15/02/2022	w	AG,AP,S	4								X	
17	QC_02	15/02/2022	w	AG,AP,S	3								X	To Eurofins
18	Trip Blank	28/01/2022		Jar	3									
19	QC01	4/02/2022	Soil	ST bag	1			X						PFAS
20	QC02	4/02/2022	Soil	ST bag	1			X						PFAS to Eurofins
				TOTAL	86									

MT(ALS)

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; Li = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles. **Air Container Codes:** DGU = Dust Gauge Unpreserved,DGP=Dust gauge Preserved



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[redacted]

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hello [redacted]

Attached is an e-COC for samples I dropped off at Tasfast yesterday hopefully they will arrive today or Monday morning at the latest.

In this batch are some reinstates from the first batch which was sent through.

Please give me a call if you have any queries.

Regards,

[redacted]

CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com

BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5800 E: gladstone@alsglobal.com

MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com

MUDGEE 1/29 Sydney Road Mudgee NSW Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com

NEWCASTLE 5/585 Maitland Road Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com

NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com

PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com

SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: [redacted]

WOLLONGONG 4/19 Ken Tubman Drive Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

DRAFT

CLIENT: JACOBS	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)	
OFFICE: MELB		Custody Seal Intact?	Yes No N/A
PROJECT: HEYBRIDGE PROJECT NO.:	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: IS360318 PURCHASE ORDER NO.:	COUNTRY OF ORIGIN:	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: AV CONTACT PH:		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: AV / MSN SAMPLER MOBILE:	RELINQUISHED BY: AV	RECEIVED BY:	RELINQUISHED BY: RECEIVED BY:
COC Emailed to ALS? (YES / NO) EDD FORMAT (or default):	DATE/TIME: 17/2	DATE/TIME:	DATE/TIME: DATE/TIME:
Email Reports to: [redacted]			
Email Invoice to:			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S-3; S-7 (NEPM Suite - 15 Metals); (TRH (C6-C40); BTEXN / PAH)	S-13; S-23; EP231 (OC / OP Pesticides; PCB); (VOC / SVOC); (PFAS – short Suite (12 analytes))	CORE-7 (pH (1:5), Soluble Sulfate, Soluble Chloride)	P-22 (Fe, CEC; pH($CaCl_2$), TOC, Clay Content + pH(1:1), EC(1:5))	EN33 (TCLP (non-volatile))	EA003 (pHF and pHFOX)	EA200 (ACM presence absence)	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	HB-BH01-C	15/02/22	W	P, SP, AP, SH, VS, AG	11									
2	HB-BH02-C	15/02/22	W	11	11									
3	HB-BH03-C	15/02/22	W	11	11									
4	HB-BH06-C	15/02/22	W	11	11									
5	HB-BH06-C(S)	15/02/22	W	AP, AG, VS, SH	7									
6	HB-BH01-C-0.1	4/2/22	S	B, Jar	4									
7	HB-BH01-C-0.5	4/2/22	S	B, Jar	3									
8	HB-BH01-C-2	4/2/22	S	Jar	1									
9	Rinsate Gloves	10/2/22	W	AG, ~~VS~~	2									
10	Rinsate Trowle	10/2/22	W	AG	1									
11	Rinsate Auger	10/2/22	W	VS	1									
12	Rinsate; Trowl Glove Auger	08/2/22	W	AG	3									
				TOTAL	66									

ECOC

Environmental Division Melbourne
Work Order Reference
EM2202619

Received: 17/2, 10:08 Carrier: TasFast
889472
475
Seal: O N
O

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles
Air Container Codes: DGU = Dust Gauge Unpresrerved; DGP=Dust gauge Preserved

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
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☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com
☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: JACOBS	TURNAROUND REQUIREMENTS : ☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE: MELB	(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) Non Standard or urgent TAT	Custody Seal Intact?	Yes No N/A
PROJECT: HEYBRIDGE PROJECT NO.:	ALS QUOTE NO.:	Free ice / frozen ice bricks present upon receipt?	Yes No N/A
ORDER NUMBER: IS360318 PURCHASE ORDER NO.:	COUNTRY OF ORIGIN:	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: AV CONTACT PH:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	Other comment:	
SAMPLER: MW/AV SAMPLER MOBILE:	RELINQUISHED BY: AV	RECEIVED BY:	RELINQUISHED BY: RECEIVED BY:
COC Emailed to ALS? (YE[redacted]	DATE/TIME: 17/2	DATE/TIME:	DATE/TIME: DATE/TIME:
Email Reports to:			
Email Invoice to:			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
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13	Rinsate 1 Glove	15/02/22	W	AG, VS, P, AP	8									
14	QC_01	15/02/22	W	AG, AP, S	4									E COC
15	QC_02	15/02/22		AG, AP, S	3									
16	Trip Blank		S	Jar	3									
17	QC01	4/02/22	S	ST	1									
18	QC02	4/02/22		ST	1									
7					~~360~~									
8														
9														
10														
11														
12														
				TOTAL	20									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
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CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE: 21 Burma Road Pooraka SA 5095
Ph: 08 8359 0890 E: adelaide@alsglobal.com

BRISBANE: 32 Shand Street Stafford QLD 4053
Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

DARWIN: 27 Ashley Street Winnellie NT 0820
Ph: 08 8984 0550 E: samples.darwin@alsglobal.com

GEELONG: 2 Ricketts Road Mount Waverley VIC 3149
Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com

GOLD COAST: 6/585 Maitland Road Mayfield West NSW 2304
Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com

NEWCASTLE: 5 Kelly Place Kotara NSW 2289
Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com

SYDNEY: 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

TOWNSVILLE: 14-15 Desma Court Bohle QLD 4818
Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

WAGGA WAGGA: 50 Salmon Street Wagga Wagga NSW 2650
Ph: 02 6971 9696 E: wagga.enquiry@alsglobal.com

WOLLONGONG: Unit 1, 2 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: Jacobs	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	✱ Standard TAT (List due date):	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: Melbourne		Non Standard or urgent TAT	Custody Seal Intact? Yes No N/A
PROJECT: Heybridge **PROJECT NO** IS360318	**ALS QUOTE NO.:** ME/030/22	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.** TBC	**COUNTRY OF ORIGIN:**	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: AV **CONTACT PH:** 0412 026 499		OF: 1 2 3 4 5 6 7	Other comment:

SAMPLER: AV	**SAMPLER MOBILE:** 0412026499	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:** / **RECEIVED BY:**
COC Emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**			
Email Reports to: antony.volcich@jacobs.com		DATE/TIME: Antony Volcich 12:30pm 17/02/22	DATE/TIME:	DATE/TIME: / DATE/TIME
Email Invoice to: antony.volcich@jacobs.com				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required)								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	metals (As, B, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Se, Tl, V, Zn, Hg) and hydrocarbon compounds (TRH, BTEX, PAH)	(pH, chloride, sulfate, electrical conductivity and resistivity)	total cyanide, (VOCs), (SVOCs), (PFAS), (OCP), s (PCB) and total phenols.	pH, cation exchange capacity and %clay	leachable (TCLP/ASLP) metals , (PAH), OCP, PCB, total phenol and total cyanide	laboratory pH and oxidised pH, SGPCAS	asbestos	pH, Total Dissolved Solids (TDS), major cations and anions, ammonia, nitrite, nitrate, total nitrogen, total cyanide, free cyanide, sulfate, sulfide, dissolved metals (As, B, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Ni, Se, Tl, V, Zn). VOCs, SVOCs, PFAS and corrosivity (incl. electrical conductivity and resistivity).	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	HB-BH01-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
2	HB-BH02-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
3	HB-BH03-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
4	HB-BH06-C	15/02/2022	W	P,SP,AP,SH,VS,AG	11								X	Green unpreserved supplemented for rinsate bottle
5	HB-BH06-C (s)	15/02/2022	W	AP,AG,VS,SH	7								X	Not enough sample volume for complete analysis
21 + 6	HB-BH01-C-0.1	4/02/2022	Soil	B,Jar	4	X				X		X		
7	HB-BH01-C-0.5	4/02/2022	Soil	B,Jar	3		X	X				X		
MT(ALS) 8	HB-BH01-C-2_02	4/02/2022	Soil	Jar	1	X								
9	Rinsate Gloves	10/02/2022	w	AG	2	X								TRH
10	Rinsate Trowel	10/02/2022	w	AG	1	X								TRH
11	Rinsate Auger	10/02/2022	w	VS	1	X								SVOC,VOC
12	Rinsate Trowel	8/02/2022	w	AG	1	X								TRH
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14	Rinsate Auger	8/02/2022	w	AG	1	X								TRH
15	Rinsate 1 Glove	15/02/2022	w	AG,VS,P,AP	8	X		X						TRH, PFAS,SVOC,VOC
16	QC_01	15/02/2022	w	AG,AP,S	4								X	
17	QC_02	15/02/2022	w	AG,AP,S	3								X	To Eurofins
18	Trip Blank	28/01/2022		Jar	3									
19	QC01	4/02/2022	Soil	ST bag	1			X						PFAS
20	QC02	4/02/2022	Soil	ST bag	1			X						PFAS to Eurofins
				TOTAL	86									

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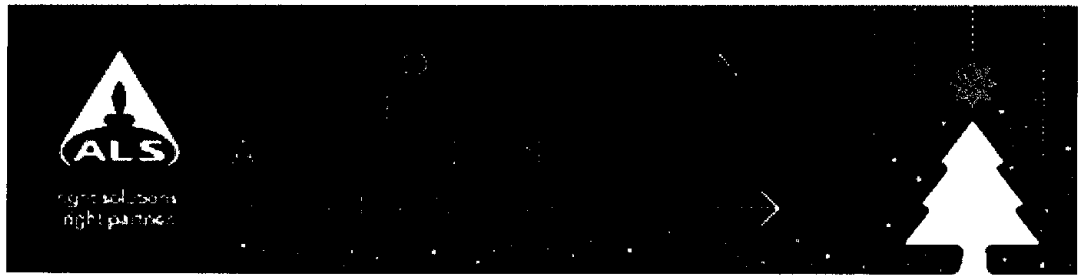

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[redacted]

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hello Peter,

Attached is an e-COC for samples I dropped off at Tasfast yesterday hopefully they will arrive today or Monday morning at the latest.

In this batch are some reinstates from the first batch which was sent through.

Please give me a call if you have any queries.

Regards,

[redacted]

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2202619**

Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: Antony Volcich	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: Antony.Volcich@jacobs.com	E-mail	: peter.ravlic@alsglobal.com
Telephone	: ----	Telephone	: +6138549 9645
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: IS360318	Page	: 1 of 5
Order number	: ----	Quote number	: EM2022SINKNI0002 (ME/030/22)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AV		

Dates

Date Samples Received	: 17-Feb-2022 10:08	Issue Date	: 23-Feb-2022
Client Requested Due Date	: 25-Feb-2022	Scheduled Reporting Date	: **25-Feb-2022**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 4.75°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 19 / 18

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample 005 to be filtered through a 0.45um filter prior to the dissolved metals analysis.**
- **Sample 017 has been forwarded to Eurofins.**
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

Method Sample ID	Sample Container Received	Preferred Sample Container for Analysis
Dissolved Mercury by FIMS : EG035F		
HB-BH06-C (s)	- Clear Plastic Bottle - Unfiltered; Lab-acidified	- Clear Plastic Bottle - Nitric Acid; Filtered
Dissolved Metals by ICP-MS - Suite A : EG020A-F		
HB-BH06-C (s)	- Clear Plastic Bottle - Unfiltered; Lab-acidified	- Clear Plastic Bottle - Nitric Acid; Filtered
Dissolved Metals by ICP-MS - Suite B : EG020B-F		
HB-BH06-C (s)	- Clear Plastic Bottle - Unfiltered; Lab-acidified	- Clear Plastic Bottle - Nitric Acid; Filtered

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EG005C Leachable Metals by ICPAES	SOIL - EG035C Leachable Mercury	SOIL - EN60a-G ASLP Leachate Procedure - Glass Leaching	SOIL - EN60Za ASLP Leachate (ZHE)	SOIL - S-03 15 Metals (NEPM 2013 Suite - incl. Digestion)	SOIL - S-07 TRH/BTEXN/PAH (SIM)
EM2202619-006	04-Feb-2022 00:00	HB-BH01-C-0.1	✓	✓	✓	✓	✓	✓	✓
EM2202619-007	04-Feb-2022 00:00	HB-BH01-C-0.5	✓						
EM2202619-008	04-Feb-2022 00:00	HB-BH01-C-2	✓					✓	✓
EM2202619-021	04-Feb-2022 00:00	HB-BH01-C-0.1		✓	✓				

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA200G Asbestos Identification in Soils -	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EK026SF Total Cyanide by Segmented Flow Analyser	SOIL - IN4S-EM pH (CaCl) plus EC (1:5)	SOIL - W-11 OC/PCB	SOIL - W-14A PAH/Phenols (SIM)
EM2202619-006	04-Feb-2022 00:00	HB-BH01-C-0.1	✓		✓	✓		✓	✓
EM2202619-007	04-Feb-2022 00:00	HB-BH01-C-0.5	✓	✓			✓		
EM2202619-008	04-Feb-2022 00:00	HB-BH01-C-2			✓				
EM2202619-019	04-Feb-2022 00:00	QC01	✓						
EM2202619-021	04-Feb-2022 00:00	HB-BH01-C-0.1				✓		✓	✓

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA080 Resistivity (1:5)	SOIL - ED045G (solids) Chloride Soluble by Discrete Analyser	SOIL - EK026SF (Solids) Total Cyanide By Segmented Flow Analyser	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-23 SVOC/VOC
EM2202619-007	04-Feb-2022 00:00	HB-BH01-C-0.5	✓	✓	✓	✓	✓	✓

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SOIL - EN33a-G TCLP Leachate - Glass Leaching Vessel	SOIL - EN33Za TCLP Leachate (ZHE)
EM2202619-018	28-Jan-2022 00:00	Trip Blank	✓		
EM2202619-021	04-Feb-2022 00:00	HB-BH01-C-0.1		✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA005P pH (PCT)	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EK025SF Free CN By Segmented Flow Analyser	WATER - EK026SF Total Cyanide by Segmented Flow Analyser	WATER - EK085M Sulfide as S 2-	WATER - NT-07 Total Nitrogen + NO2 + NO3 + NH3	WATER - W-23 SVOC/VOC
EM2202619-001	15-Feb-2022 00:00	HB-BH01-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-002	15-Feb-2022 00:00	HB-BH02-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-003	15-Feb-2022 00:00	HB-BH03-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-004	15-Feb-2022 00:00	HB-BH06-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-005	15-Feb-2022 00:00	HB-BH06-C (s)							✓
EM2202619-015	15-Feb-2022 00:00	Rinsate 1 Glove							✓
EM2202619-016	15-Feb-2022 00:00	QC_01			✓	✓	✓		

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA010P Electrical Conductivity (PCT)	WATER - EA080 Resistivity	WATER - EG020F Dissolved Metals by ICP/MS	WATER - EK055G Ammonia as N By Discrete Analyser	WATER - EK062G Total Nitrogen as N (TKN + NOx reported) By	WATER - EP231X PFAS - Full Suite (28 analytes)	WATER - W-03 15 Metals (NEPM Suite)
EM2202619-001	15-Feb-2022 00:00	HB-BH01-C	✓	✓	✓			✓	✓
EM2202619-002	15-Feb-2022 00:00	HB-BH02-C	✓	✓	✓			✓	✓
EM2202619-003	15-Feb-2022 00:00	HB-BH03-C	✓	✓	✓			✓	✓
EM2202619-004	15-Feb-2022 00:00	HB-BH06-C	✓	✓	✓			✓	✓
EM2202619-005	15-Feb-2022 00:00	HB-BH06-C (s)			✓	✓	✓	✓	✓
EM2202619-015	15-Feb-2022 00:00	Rinsate 1 Glove						✓	
EM2202619-016	15-Feb-2022 00:00	QC_01			✓				✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP071-SV TRH - SV Fractions only
EM2202619-009	10-Feb-2022 00:00	Rinsate Gloves	✓
EM2202619-010	10-Feb-2022 00:00	Rinsate Trowel	✓
EM2202619-012	08-Feb-2022 00:00	Rinsate Trowel	✓
EM2202619-013	08-Feb-2022 00:00	Rinsate Gloves	✓
EM2202619-014	08-Feb-2022 00:00	Rinsate Auger	✓
EM2202619-015	15-Feb-2022 00:00	Rinsate 1 Glove	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP074 (water) Volatile Organic Compounds	WATER - EP075 Semivolatile Organic Compounds
EM2202619-011	10-Feb-2022 00:00	Rinsate Auger	✓	
EM2202619-016	15-Feb-2022 00:00	QC_01		✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received Date	Samples Received Evaluation	Instructions Received Date	Instructions Received Evaluation
EA001: pH in soil using a 0.01M CaCl2 extract							
HB-BH01-C-0.5	Soil Glass Jar - Unpreserved	11-Feb-2022	21-Feb-2022	17-Feb-2022	×	18-Feb-2022	×
EA010: Electrical Conductivity (1:5)							
HB-BH01-C-0.5	Soil Glass Jar - Unpreserved	11-Feb-2022	21-Mar-2022	17-Feb-2022	×	18-Feb-2022	×
EP074: Volatile Organic Compounds							
HB-BH01-C-0.5	Soil Glass Jar - Unpreserved	11-Feb-2022	11-Feb-2022	17-Feb-2022	×	18-Feb-2022	×

Matrix: **WATER** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received Date	Samples Received Evaluation	Instructions Received Date	Instructions Received Evaluation
EP071-SV: TRH - Semivolatile Fractions Only							
Rinsate Auger	Amber Glass Bottle - Unpreserve	15-Feb-2022	02-Apr-2022	17-Feb-2022	×	18-Feb-2022	×
Rinsate Gloves	Amber Glass Bottle - Unpreserve	17-Feb-2022	02-Apr-2022	17-Feb-2022	✓	18-Feb-2022	×
Rinsate Gloves	Amber Glass Bottle - Unpreserve	15-Feb-2022	02-Apr-2022	17-Feb-2022	×	18-Feb-2022	×
Rinsate Trowel	Amber Glass Bottle - Unpreserve	17-Feb-2022	02-Apr-2022	17-Feb-2022	✓	18-Feb-2022	×
Rinsate Trowel	Amber Glass Bottle - Unpreserve	15-Feb-2022	02-Apr-2022	17-Feb-2022	×	18-Feb-2022	×

Requested Deliverables

Antony Volcich

- *AU Certificate of Analysis - NATA (COA)	Email	Antony.Volcich@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Antony.Volcich@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Antony.Volcich@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Antony.Volcich@jacobs.com
- A4 - AU Tax Invoice (INV)	Email	Antony.Volcich@jacobs.com
- Chain of Custody (CoC) (COC)	Email	Antony.Volcich@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	Antony.Volcich@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	Antony.Volcich@jacobs.com
- Purchase Order Request Letter (PO_Request)	Email	Antony.Volcich@jacobs.com

ENVIRO COSTING INVOICE

- A4 - AU Tax Invoice (INV)	Email	envirocosting.brisbane@alsglobal.com

JACOBS RESULTS

- EDI Format - ESDAT (ESDAT)	Email	jacobs.labresults@esdat.net

Sydney Invoices

- A4 - AU Tax Invoice (INV)	Email	Envirocosting.sydney@ALSGlobal.com

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2202619**

Client	: **JACOBS GROUP(AUSTRALIA)PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	[redacted]	E-mail	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Facsimile	: ----	Facsimile	[redacted]
Project	: IS360318	Page	: 1 of 5
Order number	: ----	Quote number	: EM2022SINKNI0002 (ME/030/22)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AV		

Dates

Date Samples Received	: 17-Feb-2022 10:08	Issue Date	: 19-Feb-2022
Client Requested Due Date	: 25-Feb-2022	Scheduled Reporting Date	: **25-Feb-2022**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 4.75°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 20 / 17

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample 005 to be filtered through a 0.45um filter prior to the dissolved metals analysis.**
- **Sample 017 has been forwarded to Eurofins.**
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

Method Sample ID	Sample Container Received	Preferred Sample Container for Analysis
Dissolved Mercury by FIMS : EG035F		
HB-BH06-C (s)	- Clear Plastic Bottle - Unfiltered; Lab-acidified	- Clear Plastic Bottle - Nitric Acid; Filtered
Dissolved Metals by ICP-MS - Suite A : EG020A-F		
HB-BH06-C (s)	- Clear Plastic Bottle - Unfiltered; Lab-acidified	- Clear Plastic Bottle - Nitric Acid; Filtered
Dissolved Metals by ICP-MS - Suite B : EG020B-F		
HB-BH06-C (s)	- Clear Plastic Bottle - Unfiltered; Lab-acidified	- Clear Plastic Bottle - Nitric Acid; Filtered

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EG005C Leachable Metals by ICPAES	SOIL - EG035C Leachable Mercury	SOIL - EN60a-G ASLP Leachate Procedure - Glass Leaching	SOIL - EN60Za ASLP Leachate (ZHE)	SOIL - S-03 15 Metals (NEPM 2013 Suite - incl. Digestion)	SOIL - S-07 TRH/BTEXN/PAH (SIM)
EM2202619-006	04-Feb-2022 00:00	HB-BH01-C-0.1	✓	✓	✓	✓	✓	✓	✓
EM2202619-007	04-Feb-2022 00:00	HB-BH01-C-0.5	✓						
EM2202619-008	04-Feb-2022 00:00	HB-BH01-C-2	✓					✓	✓
EM2202619-021	04-Feb-2022 00:00	HB-BH01-C-0.1		✓	✓				

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA200G Asbestos Identification in Soils -	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EK026SF Total Cyanide by Segmented Flow Analyser	SOIL - IN4S-EM pH (CaCl) plus EC (1:5)	SOIL - W-11 OC/PCB	SOIL - W-14A PAH/Phenols (SIM)
EM2202619-006	04-Feb-2022 00:00	HB-BH01-C-0.1	✓		✓	✓		✓	✓
EM2202619-007	04-Feb-2022 00:00	HB-BH01-C-0.5	✓	✓			✓		
EM2202619-008	04-Feb-2022 00:00	HB-BH01-C-2			✓				
EM2202619-021	04-Feb-2022 00:00	HB-BH01-C-0.1				✓		✓	✓

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA080 Resistivity (1:5)	SOIL - ED045G (solids) Chloride Soluble by Discrete Analyser	SOIL - EK026SF (Solids) Total Cyanide By Segmented Flow Analyser	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-23 SVOC/VOC
EM2202619-007	04-Feb-2022 00:00	HB-BH01-C-0.5	✓	✓	✓	✓	✓	✓

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SOIL - EN33a-G TCLP Leachate - Glass Leaching Vessel	SOIL - EN33Za TCLP Leachate (ZHE)
EM2202619-018	28-Jan-2022 00:00	Trip Blank	✓		
EM2202619-019	04-Feb-2022 00:00	QC01	✓		
EM2202619-020	04-Feb-2022 00:00	QC02	✓		
EM2202619-021	04-Feb-2022 00:00	HB-BH01-C-0.1		✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA005P pH (PCT)	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EK025SF Free CN By Segmented Flow Analyser	WATER - EK026SF Total Cyanide by Segmented Flow Analyser	WATER - EK085M Sulfide as S 2-	WATER - NT-07 Total Nitrogen + NO2 + NO3 + NH3	WATER - W-23 SVOC/VOC
EM2202619-001	15-Feb-2022 00:00	HB-BH01-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-002	15-Feb-2022 00:00	HB-BH02-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-003	15-Feb-2022 00:00	HB-BH03-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-004	15-Feb-2022 00:00	HB-BH06-C	✓	✓	✓	✓	✓	✓	✓
EM2202619-005	15-Feb-2022 00:00	HB-BH06-C (s)							✓
EM2202619-015	15-Feb-2022 00:00	Rinsate 1 Glove							✓
EM2202619-016	15-Feb-2022 00:00	QC_01			✓	✓	✓		

Matrix: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EA010P Electrical Conductivity (PCT)	WATER - EA080 Resistivity	WATER - EG020F Dissolved Metals by ICP/MS	WATER - EK055G Ammonia as N By Discrete Analyser	WATER - EK062G Total Nitrogen as N (TKN + NOx reported) By	WATER - EP231X PFAS - Full Suite (28 analytes)	WATER - W-03 15 Metals (NEPM Suite)
EM2202619-001	15-Feb-2022 00:00	HB-BH01-C	✓	✓	✓			✓	✓
EM2202619-002	15-Feb-2022 00:00	HB-BH02-C	✓	✓	✓			✓	✓
EM2202619-003	15-Feb-2022 00:00	HB-BH03-C	✓	✓	✓			✓	✓
EM2202619-004	15-Feb-2022 00:00	HB-BH06-C	✓	✓	✓			✓	✓
EM2202619-005	15-Feb-2022 00:00	HB-BH06-C (s)			✓	✓	✓	✓	✓
EM2202619-015	15-Feb-2022 00:00	Rinsate 1 Glove						✓	
EM2202619-016	15-Feb-2022 00:00	QC_01			✓				✓

Matrix: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EP071-SV TRH - SV Fractions only
EM2202619-009	10-Feb-2022 00:00	Rinsate Gloves	✓
EM2202619-010	10-Feb-2022 00:00	Rinsate Trowel	✓
EM2202619-012	08-Feb-2022 00:00	Rinsate Trowel	✓
EM2202619-013	08-Feb-2022 00:00	Rinsate Gloves	✓
EM2202619-014	08-Feb-2022 00:00	Rinsate Auger	✓
EM2202619-015	15-Feb-2022 00:00	Rinsate 1 Glove	✓

Matrix: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EP074 (water) Volatile Organic Compounds	WATER - EP075 Semivolatile Organic Compounds
EM2202619-011	10-Feb-2022 00:00	Rinsate Auger	✓	
EM2202619-016	15-Feb-2022 00:00	QC_01		✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received Date	Samples Received Evaluation	Instructions Received Date	Instructions Received Evaluation
EA001: pH in soil using a 0.01M CaCl2 extract							
HB-BH01-C-0.5	Soil Glass Jar - Unpreserved	11-Feb-2022	11-Feb-2022	17-Feb-2022	×	18-Feb-2022	×
EA010: Electrical Conductivity (1:5)							
HB-BH01-C-0.5	Soil Glass Jar - Unpreserved	11-Feb-2022	11-Mar-2022	17-Feb-2022	×	18-Feb-2022	×
EP074: Volatile Organic Compounds							
HB-BH01-C-0.5	Soil Glass Jar - Unpreserved	11-Feb-2022	11-Feb-2022	17-Feb-2022	×	18-Feb-2022	×

Matrix: **WATER** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received Date	Samples Received Evaluation	Instructions Received Date	Instructions Received Evaluation
EK057G: Nitrite as N by Discrete Analyser							
HB-BH01-C	Clear Plastic Bottle - Natural	----	17-Feb-2022	17-Feb-2022	✓	18-Feb-2022	×
HB-BH02-C	Amber Glass Bottle - Unpreserv	----	17-Feb-2022	17-Feb-2022	✓	18-Feb-2022	×
HB-BH03-C	Amber Glass Bottle - Unpreserv	----	17-Feb-2022	17-Feb-2022	✓	18-Feb-2022	×
HB-BH06-C	Amber Glass Bottle - Unpreserv	----	17-Feb-2022	17-Feb-2022	✓	18-Feb-2022	×
EP071-SV: TRH - Semivolatile Fractions Only							
Rinsate Auger	Amber Glass Bottle - Unpreserv	15-Feb-2022	27-Mar-2022	17-Feb-2022	×	18-Feb-2022	×
Rinsate Gloves	Amber Glass Bottle - Unpreserv	17-Feb-2022	29-Mar-2022	17-Feb-2022	✓	18-Feb-2022	×
Rinsate Gloves	Amber Glass Bottle - Unpreserv	15-Feb-2022	27-Mar-2022	17-Feb-2022	×	18-Feb-2022	×
Rinsate Trowel	Amber Glass Bottle - Unpreserv	17-Feb-2022	29-Mar-2022	17-Feb-2022	✓	18-Feb-2022	×
Rinsate Trowel	Amber Glass Bottle - Unpreserv	15-Feb-2022	27-Mar-2022	17-Feb-2022	×	18-Feb-2022	×

Requested Deliverables

Antony Volcich

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- A4 - AU Tax Invoice (INV) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - ENMRG (ENMRG) Email
- EDI Format - ESDAT (ESDAT) Email
- Purchase Order Request Letter (PO_Request) Email

ENVIRO COSTING INVOICE

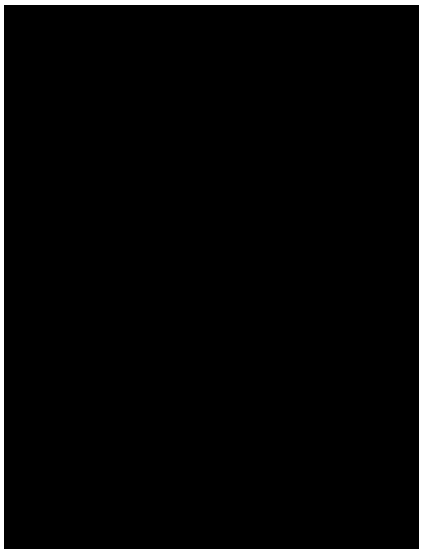
- A4 - AU Tax Invoice (INV) Email

JACOBS RESULTS

- EDI Format - ESDAT (ESDAT) Email

Sydney Invoices

- A4 - AU Tax Invoice (INV) Email



Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521
Phone: +61 3 8564 5000
e.mail: EnviroRemittances@eurofins.com

Tax Invoice

Jacobs Group (Australia) P/L VIC
PO Box 312 Flinders Lane
Melbourne
VIC 8009

Purchase Order #: Not provided
Invoice #: 681569
Date: Mar 21, 2022
Report #: 864101
Project Name: HEYBRIDGE
Project ID: IS3603018
Contact: [redacted]

Description	Quantity	Price	Total	Notes
Solid Samples				
Asbestos - AS4964	1	$35.00	$35.00	
BTEX	1	$24.00	$24.00	
Cyanide (total)	1	$12.00	$12.00	
Metals				
Bo, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Hg, Ni, Se, V, Zn, Ti	1	$24.00	$24.00	
Organochlorine Pesticides	1	$24.00	$24.00	
Per- and Polyfluoroalkyl Substances (PFASs)	1	$157.50	$157.50	
Phenols (Speciated)	1	$39.00	$39.00	
Polychlorinated Biphenyls	1	$27.00	$27.00	
Polycyclic Aromatic Hydrocarbons	1	$39.00	$39.00	
Semivolatile Organics	2	$105.00	$210.00	
Total Recoverable Hydrocarbons	1	$30.00	$30.00	
Volatile Organics	1	$52.50	$52.50	
Handling Charge	1	$30.00	$30.00	

	Nett Total	$704.00
	GST	$70.40
	Total Inc GST	$774.40

This invoice is subject to Eurofins General Terms of Sales. Copies available on request or at http://environment.eurofins.com.au

Please detach and return with payment to:
Postal:
Eurofins Environment Testing
6 Monterey Road
Dandenong South
Victoria, 3175

Please EFT Payments to:
Eurofins Environment Testing
BSB 063-498
Acct No: 10057019
e.mail Remittances:
EnviroRemittances@eurofins.com

Invoice Number : 681569
Amount Inc GST : $774.40

TERMS STRICTLY 30 DAYS

CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com

BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

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PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com

WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

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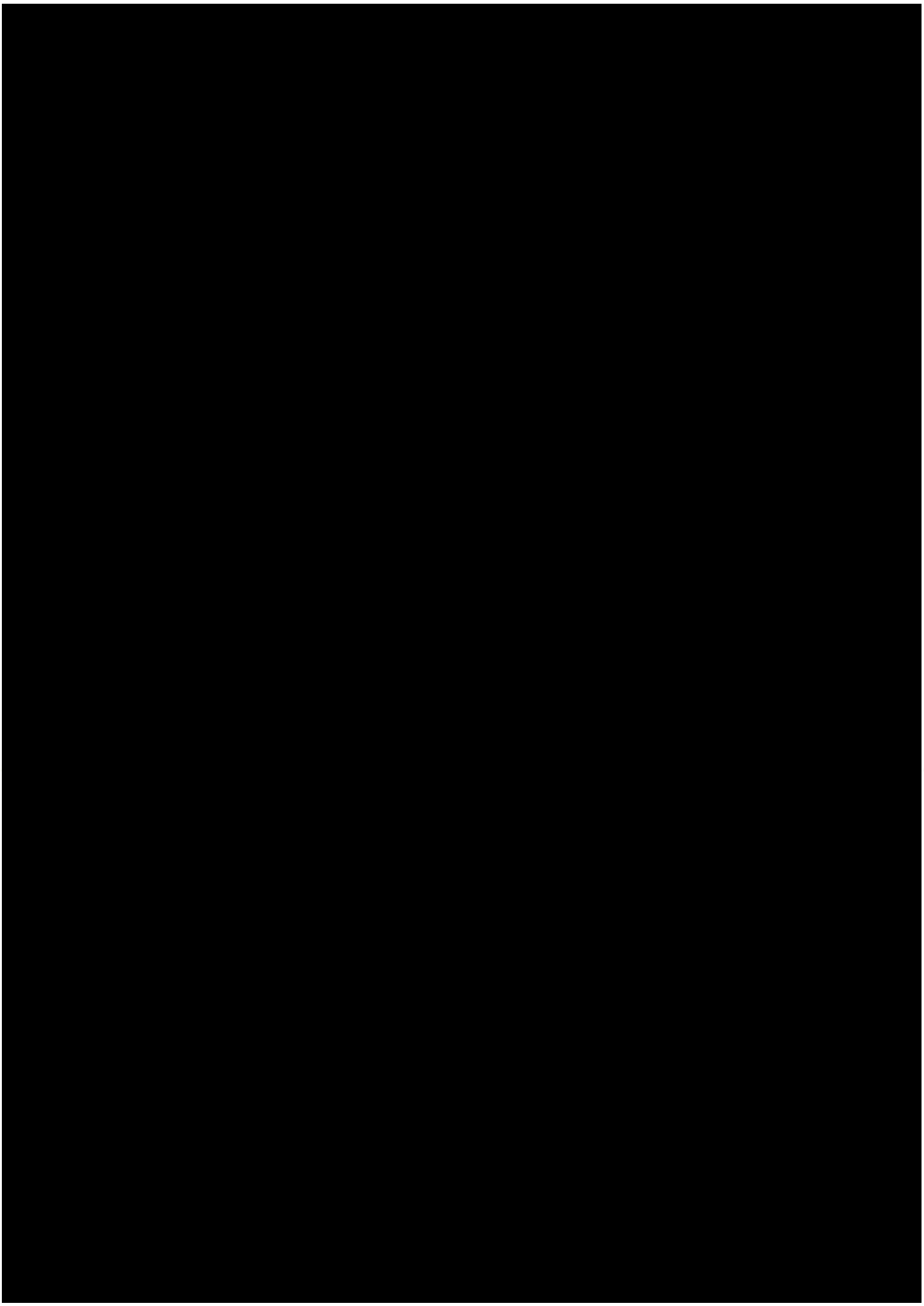
CLIENT: Jacobs	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☒ Standard TAT (List due date): Non Standard or urgent TAT	FOR LABORATORY USE ONLY (Circle)
OFFICE: Melbourne			Custody Seal Intact? Yes No N/A
PROJECT: Heybridge PROJECT NO. IS380318	ALS QUOTE NO.: ME/030/22		Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PURCHASE ORDER NO.: TBC	COUNTRY OF ORIGIN:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: AV CONTACT PH:		OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: AV SAMPLER MOBILE: 0412026499	RELINQUISHED BY: JM (MS)	RECEIVED BY:	RELINQUISHED BY: RECEIVED BY:
COC Emailed to ALS? (YES / NO) EDD FORMAT (or default):	DATE/TIME: 16/2	DATE/TIME:	DATE/TIME: DATE/TIME:
Email Reports to: antony.volcich@jacobs.com; michael.stacey@jacobs.com			
Email Invoice to: antony.volcich@jacobs.com; michael.stacey@jacobs.com			
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:			

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	metals (As, B, Ba, Cd, Cr, Co, Cu, Mn, Mo, Ni, Pb, Se, Zn, Hg) and hydrocarbon compounds (TRH, BTEX, PAH)	fph, chloride, sulfate, electrical conductivity and resistivity)	total cyanide, (VOCs), (SVOCs), (PFAS), (OCP), s (PCB) and total phenols.	pH, cation exchange capacity and %clay	leachable (TCLP/ASLP) metals , (PAH), OCP, PCB, total phenol and total cyanide	laboratory pH and oxidised pH, SOP/QAS	asbestos	Hold	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	HB-BH04-C-0.1	31/01/2022	Soil			X						X		2101
2	HB-BH04-C-1	31/01/2022	Soil									X		
3	HB-BH04-C-1.5	31/01/2022	Soil			X		X			X			
4	HB-BH04-C-2	31/01/2022	Soil			X	X	X			X			
6	HB-BH05-C-0.1	31/01/2022	Soil					X				X		
5	HB-BH05-C-0.5	31/01/2022	Soil			X				X				
7	HB-BH05-C-1	31/01/2022	Soil			X	X					X		
8	HB-BH06-C-0.5	31/01/2022	Soil					X				X		
9	HB-BH06-C-1	31/01/2022	Soil			X								
10	HB-BH06-C-2	31/01/2022	Soil			X	X					X		
11	HB-TP01-C-0.1	28/01/2022	Soil			X	X		X			X		
12	QC101_280122	28/01/2022	Soil			Send to Eurofins								
13	QC001_280122	28/01/2022	Soil			X								
14	HB-TP01-C-0.5	28/01/2022	Soil					X			X	X		
15	HB-TP01-C-1	28/01/2022	Soil			X				X				
16	HB-TP01-PACM	28/01/2022	ACM									X		
17	HB-TP02-C-0.1	28/01/2022	Soil									X		
18	HB-TP02-C-0.5	28/01/2022	Soil			X	X							
19	HB-TP02-C-1	28/01/2022	Soil					X			X	X		
20	HB-TP02-C-2	28/01/2022	Soil			X								
21	HB-TP02-C-3	28/01/2022	Soil										X	
22	HB-TP02-C-PACM-0.9	28/01/2022	ACM									X		
23	HB-TP03-C-0.1	31/01/2022	Soil					X				X		
24	HB-TP03-C-0.5	31/01/2022	Soil									X		
25	HB-TP03-C-1	31/01/2022	Soil			X				X				
26	HB-TP03-C-2	31/01/2022	Soil								X			
27	HB-TP03-C-3	31/01/2022	Soil			X	X							
28	HB-TP04-C-0.1	31/01/2022	Soil			X						X		
29	HB-TP04-C-0.5	31/01/2022	Soil					X						
30	QC102_310122	31/01/2022	Soil			Send to Eurofins								
31	QC02_310122	31/01/2022	Soil			X								
32	HB-TP04-C-1	31/01/2022	Soil									X		
33	HB-TP04-C-3	31/01/2022	Soil			X	X							
34	HB-TP05-C-0.1	28/01/2022	Soil									X		
35	HB-TP05-C-0.5	28/01/2022	Soil			X	X			X				
36	HB-TP05-C-1	28/01/2022	Soil					X				X		
37	HB-TP06-C-0.1	28/01/2022	Soil					X				X		
38	HB-TP06-C-0.5	28/01/2022	Soil								X	X		
39	HB-TP06-C-1	28/01/2022	Soil			X	X							
40	HB-TP06-C-2	28/01/2022	Soil										X	
41	HB-TP06-C-3	28/01/2022	Soil										X	
42	HB-TP07-C-0.1	28/01/2022	Soil			X	X			X		X		
43	HB-TP07-C-0.5	28/01/2022	Soil					X						
44	HB-TP07-C-1	28/01/2022	Soil									X		
45	HB-TP07-C-2	28/01/2022	Soil										X	
46	HB-TP07-C-3	28/01/2022	Soil										X	
47	HB-TP08-C-0.1	31/01/2022	Soil									X		
48	HB-TP08-C-0.5	31/01/2022	Soil			X						X		
49	HB-TP08-C-1	31/01/2022	Soil					X						
50	HB-TP08-C-2	31/01/2022	Soil								X			
51	HB-TP08-C-3	31/01/2022	Soil				X							
52	HB-TP09-C-0.1	31/01/2022	Soil					X			X	X		
53	QC103_310122	31/01/2022	Soil			Send to Eurofins								
54	QC003_310122	31/01/2022	Soil									X		
55	HB-TP09-C-0.5	31/01/2022	Soil										X	
56	HB-TP09-C-1	31/01/2022	Soil			X	X							
57	HB-TP09-C-PACM	31/01/2022	ACM									X		
				TOTAL										

Date/Time: CT 17/2/22-9am
Chilled: Yes No
Temp: 5.8 -0.4 5.4 Cooler
Correction:
Final Temp:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulfate Soils; B = Unpreserved Bag; Li = Lithium Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles; Air Container Codes: DIG = Dust Gauge Unpreserved;DGP=Dust gauge Preserved

Sullivan 864101



Certificate of Analysis

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NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Jacobs Group (Australia) P/L VIC
PO Box 312 Flinders Lane
Melbourne
VIC 8009

Attention:	[redacted]
Report	864101-AID
Project Name	HEYBRIDGE
Project ID	IS3603018
Received Date	Mar 09, 2022
Date Reported	Mar 21, 2022

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name HEYBRIDGE
Project ID IS3603018
Date Sampled Jan 30, 2022
Report 864101-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
QC103_310122	22-Fe33348	Jan 30, 2022	Approximate Sample 60g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Mar 09, 2022	Indefinite

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NATA # 1261 Site # 18217

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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

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NATA # 2377 Site # 2370

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IANZ # 1327

Christchurch
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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Project Name: HEYBRIDGE
Project ID: IS3603018

Order No.:
Report #: 864101
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Mar 9, 2022 1:00 PM
Due: Mar 17, 2022
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail	Arsenic	Asbestos - AS4964	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Cyanide (total)	Lead	Manganese	Mercury	Nickel	Selenium	Titanium	Vanadium	Zinc	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Phenols (Speciated)	BTEX	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217		X																										
Brisbane Laboratory - NATA # 1261 Site # 20794																												
Mayfield Laboratory - NATA # 1261 Site # 25079																												
Perth Laboratory - NATA # 2377 Site # 2370																												
External Laboratory																												
No / **Sample ID** / **Sample Date** / **Sampling Time** / **Matrix** / **LAB ID**																												
1 — QC101_280122 — Jan 28, 2022 — — Soil — M22-Fe33346	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X	
2 — QC102_310122 — Jan 30, 2022 — — Soil — M22-Fe33347										X										X	X	X		X	X	X		X
3 — QC103_310122 — Jan 30, 2022 — — Soil — M22-Fe33348		X																										
Test Counts	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

[redacted]

General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Jacobs Group (Australia) P/L VIC
PO Box 312 Flinders Lane
Melbourne
VIC 8009

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
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Attention: [redacted]

Report **864101-S**
Project name HEYBRIDGE
Project ID IS3603018
Received Date Mar 09, 2022

Client Sample ID			**QC101_280122**	**QC102_310122**
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**M22-Fe33346**	**M22-Fe33347**
Date Sampled			**Jan 28, 2022**	**Jan 30, 2022**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	-
TRH C10-C14	20	mg/kg	< 20	-
TRH C15-C28	50	mg/kg	120	-
TRH C29-C36	50	mg/kg	250	-
TRH C10-C36 (Total)	50	mg/kg	370	-
Naphthalene[N02]	0.5	mg/kg	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-
TRH >C16-C34	100	mg/kg	280	-
TRH >C34-C40	100	mg/kg	160	-
TRH >C10-C40 (total)*	100	mg/kg	440	-
BTEX				
Benzene	0.1	mg/kg	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	126	-
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-

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Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Fluoranthene	0.5	mg/kg	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	83	-
p-Terphenyl-d14 (surr.)	1	%	74	-
Heavy Metals				
Arsenic	2	mg/kg	2.3	-
Barium	10	mg/kg	26	-
Beryllium	2	mg/kg	< 2	-
Boron	10	mg/kg	< 10	-
Cadmium	0.4	mg/kg	< 0.4	-
Chromium	5	mg/kg	16	-
Cobalt	5	mg/kg	6.2	-
Copper	5	mg/kg	24	-
Lead	5	mg/kg	220	-
Manganese	5	mg/kg	190	-
Mercury	0.1	mg/kg	1.1	-
Nickel	5	mg/kg	28	-
Selenium	2	mg/kg	< 2	-
Titanium	10	mg/kg	1500	-
Vanadium	10	mg/kg	16	-
Zinc	5	mg/kg	73	-
% Moisture	1	%	14	5.9
Cyanide (total)	5	mg/kg	-	< 5
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5

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Volatile Organics				
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5
Benzene	0.1	mg/kg	-	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1
Styrene	0.5	mg/kg	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5
Toluene	0.1	mg/kg	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5
Xylenes - Total*	0.3	mg/kg	-	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	87
Toluene-d8 (surr.)	1	%	-	85
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-HCH	0.05	mg/kg	-	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05

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Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05
Toxaphene	0.5	mg/kg	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	61
Tetrachloro-m-xylene (surr.)	1	%	-	100
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	61
Tetrachloro-m-xylene (surr.)	1	%	-	100
Phenols (Halogenated)				
2-Chlorophenol	0.5	mg/kg	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	< 1
Pentachlorophenol	1	mg/kg	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	< 1
Phenols (non-Halogenated)				
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5
2-Nitrophenol	1.0	mg/kg	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4
Total cresols*	0.5	mg/kg	-	< 0.5
4-Nitrophenol	5	mg/kg	-	< 5

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Test/Reference	LOR	Unit		
Phenols (non-Halogenated)				
Dinoseb	20	mg/kg	-	< 20
Phenol	0.5	mg/kg	-	< 0.5
Phenol-d6 (surr.)	1	%	-	85
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20
Semivolatile Organics				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5
1-Chloronaphthalene	0.5	mg/kg	-	< 0.5
1-Naphthylamine	0.5	mg/kg	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	-	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	-	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5
2-Chloronaphthalene	0.5	mg/kg	-	< 0.5
2-Chlorophenol	0.5	mg/kg	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	83
2-Methylnaphthalene	0.5	mg/kg	-	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2
2-Naphthylamine	0.5	mg/kg	-	< 0.5
2-Nitroaniline	0.5	mg/kg	-	< 0.5
2-Nitrophenol	1.0	mg/kg	-	< 1
2-Picoline	0.5	mg/kg	-	< 0.5
2.3.4.6-Tetrachlorophenol	5	mg/kg	-	< 5
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	< 5
2.4-Dinitrotoluene	0.5	mg/kg	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	< 1
2.4.6-Tribromophenol (surr.)	1	%	-	35
2.4.6-Trichlorophenol	1	mg/kg	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5
2.6-Dinitrotoluene	0.5	mg/kg	-	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4
3-Methylcholanthrene	0.5	mg/kg	-	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	-	< 0.5
4-Aminobiphenyl	0.5	mg/kg	-	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	< 0.5
4-Nitrophenol	5	mg/kg	-	< 5
4.4'-DDD	0.5	mg/kg	-	< 0.5
4.4'-DDE	0.5	mg/kg	-	< 0.5

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Test/Reference	LOR	Unit		
Semivolatile Organics				
4.4'-DDT	0.5	mg/kg	-	< 0.5
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	< 0.5
a-HCH	0.5	mg/kg	-	< 0.5
Acenaphthene	0.5	mg/kg	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5
Acetophenone	0.5	mg/kg	-	< 0.5
Aldrin	0.5	mg/kg	-	< 0.5
Aniline	0.5	mg/kg	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5
b-HCH	0.5	mg/kg	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5
Benzyl chloride	0.5	mg/kg	-	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	-	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	-	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5
d-HCH	0.5	mg/kg	-	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	-	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	-	< 0.5
Dibenzofuran	0.5	mg/kg	-	< 0.5
Dieldrin	0.5	mg/kg	-	< 0.5
Diethyl phthalate	0.5	mg/kg	-	< 0.5
Dimethyl phthalate	0.5	mg/kg	-	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	-	< 0.5
Diphenylamine	0.5	mg/kg	-	< 0.5
Endosulfan I	0.5	mg/kg	-	< 0.5
Endosulfan II	0.5	mg/kg	-	< 0.5
Endosulfan sulphate	0.5	mg/kg	-	< 0.5
Endrin	0.5	mg/kg	-	< 0.5
Endrin aldehyde	0.5	mg/kg	-	< 0.5
Endrin ketone	0.5	mg/kg	-	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5
g-HCH (Lindane)	0.5	mg/kg	-	< 0.5
Heptachlor	0.5	mg/kg	-	< 0.5
Heptachlor epoxide	0.5	mg/kg	-	< 0.5
Hexachlorobenzene	0.5	mg/kg	-	< 0.5
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	-	< 0.5
Hexachloroethane	0.5	mg/kg	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5
Methoxychlor	0.5	mg/kg	-	< 0.5

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Semivolatile Organics				
N-Nitrosodibutylamine	0.5	mg/kg	-	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	-	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	-	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5
Nitrobenzene	0.5	mg/kg	-	< 0.5
Nitrobenzene-d5 (surr.)	1	%	-	71
Pentachlorobenzene	0.5	mg/kg	-	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	-	< 0.5
Pentachlorophenol	1	mg/kg	-	< 1
Phenanthrene	0.5	mg/kg	-	< 0.5
Phenol	0.5	mg/kg	-	< 0.5
Phenol-d6 (surr.)	1	%	-	85
Pronamide	0.5	mg/kg	-	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5
Trifluralin	0.5	mg/kg	-	< 0.5
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	-	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	-	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	-	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	-	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	-	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	-	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	-	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	-	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	-	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	-	< 5
13C4-PFBA (surr.)	1	%	-	85
13C5-PFPeA (surr.)	1	%	-	94
13C5-PFHxA (surr.)	1	%	-	72
13C4-PFHpA (surr.)	1	%	-	70
13C8-PFOA (surr.)	1	%	-	77
13C5-PFNA (surr.)	1	%	-	100
13C6-PFDA (surr.)	1	%	-	87
13C2-PFUnDA (surr.)	1	%	-	84
13C2-PFDoDA (surr.)	1	%	-	88
13C2-PFTeDA (surr.)	1	%	-	79
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	-	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	-	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	-	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	-	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	-	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	-	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	-	< 10
13C8-FOSA (surr.)	1	%	-	74

Client Sample ID			QC101_280122	QC102_310122
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Fe33346	M22-Fe33347
Date Sampled			Jan 28, 2022	Jan 30, 2022
Test/Reference	LOR	Unit		
Perfluoroalkyl sulfonamido substances				
D3-N-MeFOSA (surr.)	1	%	-	95
D5-N-EtFOSA (surr.)	1	%	-	79
D7-N-MeFOSE (surr.)	1	%	-	75
D9-N-EtFOSE (surr.)	1	%	-	76
D5-N-EtFOSAA (surr.)	1	%	-	88
D3-N-MeFOSAA (surr.)	1	%	-	81
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	-	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	-	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	-	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	-	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	-	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	-	< 5
13C3-PFBS (surr.)	1	%	-	87
18O2-PFHxS (surr.)	1	%	-	90
13C8-PFOS (surr.)	1	%	-	86
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	-	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	-	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	-	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	-	< 5
13C2-4:2 FTSA (surr.)	1	%	-	71
13C2-6:2 FTSA (surr.)	1	%	-	66
13C2-8:2 FTSA (surr.)	1	%	-	74
13C2-10:2 FTSA (surr.)	1	%	-	88
PFASs Summations				
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	-	< 10
Sum of PFASs (n=30)*	50	ug/kg	-	< 50

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Heavy Metals	Melbourne	Mar 10, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cyanide (total)	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Volatile Organics	Melbourne	Mar 10, 2022	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Organochlorine Pesticides	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Mar 10, 2022	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Semivolatile Organics	Melbourne	Mar 10, 2022	14 Days
- Method: USEPA SW 846 8270			
% Moisture	Melbourne	Mar 09, 2022	14 Days
- Method: LTM-GEN-7080 Moisture			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Mar 10, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Mar 10, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Mar 10, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Mar 10, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Mar 10, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Mar 09, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Melbourne
VIC 8009

Project Name: HEYBRIDGE
Project ID: IS3603018

Order No.:
Report #: 864101
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Mar 9, 2022 1:00 PM
Due: Mar 17, 2022
Priority: 5 Day
Contact Name: Antony Volcich

[redacted]

Sample Detail	Arsenic	Asbestos - AS4964	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Cyanide (total)	Lead	Manganese	Mercury	Nickel	Selenium	Titanium	Vanadium	Zinc	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Phenols (Speciated)	BTEX	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217		X																										
Brisbane Laboratory - NATA # 1261 Site # 20794																												
Mayfield Laboratory - NATA # 1261 Site # 25079																												
Perth Laboratory - NATA # 2377 Site # 2370																												
External Laboratory																												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																								
1	QC101_280122	Jan 28, 2022		Soil	M22-Fe33346	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X				X		X		X	
2	QC102_310122	Jan 30, 2022		Soil	M22-Fe33347										X								X	X	X		X	X	X		X
3	QC103_310122	Jan 30, 2022		Soil	M22-Fe33348		X																								
Test Counts						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Titanium	mg/kg	< 10			10	Pass	
Vanadium	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Cyanide (total)	mg/kg	< 5			5	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5			0.5	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 5			5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 0.5			0.5	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-HCH	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
b-HCH	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
d-HCH	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
g-HCH (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5			0.5	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	113			70-130	Pass	
TRH C10-C14	%	113			70-130	Pass	
Naphthalene	%	78			70-130	Pass	
TRH C6-C10	%	107			70-130	Pass	
TRH >C10-C16	%	112			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	112			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	109			70-130	Pass	
Xylenes - Total*	%	109			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	102			70-130	Pass	
Anthracene	%	106			70-130	Pass	
Benz(a)anthracene	%	89			70-130	Pass	
Benzo(a)pyrene	%	94			70-130	Pass	
Benzo(b&j)fluoranthene	%	76			70-130	Pass	
Benzo(g.h.i)perylene	%	87			70-130	Pass	
Benzo(k)fluoranthene	%	105			70-130	Pass	
Chrysene	%	92			70-130	Pass	
Dibenz(a.h)anthracene	%	82			70-130	Pass	
Fluoranthene	%	105			70-130	Pass	
Fluorene	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	86			70-130	Pass	
Naphthalene	%	91			70-130	Pass	
Phenanthrene	%	97			70-130	Pass	
Pyrene	%	111			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	92			80-120	Pass	
Barium	%	91			80-120	Pass	
Beryllium	%	88			80-120	Pass	
Boron	%	88			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	97			80-120	Pass	
Cobalt	%	98			80-120	Pass	
Copper	%	100			80-120	Pass	
Lead	%	99			80-120	Pass	
Manganese	%	92			80-120	Pass	
Mercury	%	96			80-120	Pass	
Nickel	%	96			80-120	Pass	
Selenium	%	88			80-120	Pass	
Titanium	%	100			80-120	Pass	
Vanadium	%	91			80-120	Pass	
Zinc	%	90			80-120	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cyanide (total)	%	101			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	84			70-130	Pass	
1.1.1-Trichloroethane	%	72			70-130	Pass	
1.2-Dichlorobenzene	%	117			70-130	Pass	
1.2-Dichloroethane	%	97			70-130	Pass	
Trichloroethene	%	113			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	92			70-130	Pass	
4.4'-DDD	%	80			70-130	Pass	
4.4'-DDE	%	78			70-130	Pass	
4.4'-DDT	%	97			70-130	Pass	
a-HCH	%	79			70-130	Pass	
Aldrin	%	80			70-130	Pass	
b-HCH	%	85			70-130	Pass	
d-HCH	%	85			70-130	Pass	
Dieldrin	%	75			70-130	Pass	
Endosulfan I	%	82			70-130	Pass	
Endosulfan II	%	77			70-130	Pass	
Endosulfan sulphate	%	73			70-130	Pass	
Endrin	%	94			70-130	Pass	
Endrin aldehyde	%	84			70-130	Pass	
Endrin ketone	%	85			70-130	Pass	
g-HCH (Lindane)	%	80			70-130	Pass	
Heptachlor	%	99			70-130	Pass	
Heptachlor epoxide	%	99			70-130	Pass	
Hexachlorobenzene	%	76			70-130	Pass	
Methoxychlor	%	109			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	120			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	87			25-140	Pass	
2.4-Dichlorophenol	%	87			25-140	Pass	
2.4.5-Trichlorophenol	%	74			25-140	Pass	
2.4.6-Trichlorophenol	%	85			25-140	Pass	
2.6-Dichlorophenol	%	83			25-140	Pass	
4-Chloro-3-methylphenol	%	89			25-140	Pass	
Pentachlorophenol	%	64			25-140	Pass	
Tetrachlorophenols - Total	%	67			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	31			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	45			25-140	Pass	
2-Nitrophenol	%	96			25-140	Pass	
2.4-Dimethylphenol	%	95			25-140	Pass	
2.4-Dinitrophenol	%	53			25-140	Pass	
2-Methylphenol (o-Cresol)	%	92			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	93			25-140	Pass	
4-Nitrophenol	%	66			25-140	Pass	
Dinoseb	%	64			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenol	%	89			25-140	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	84			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	107			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	107			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	112			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	104			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	108			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	104			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	112			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	121			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	101			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	107			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	83			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	100			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	106			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	98			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	123			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	88			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	127			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	120			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	95			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	87			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	53			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	111			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	135			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	120			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	98			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	123			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-Ma11774	NCP	%	91			70-130	Pass	
TRH C10-C14	M22-Ma16730	NCP	%	124			70-130	Pass	
Naphthalene	M22-Ma11774	NCP	%	119			70-130	Pass	
TRH C6-C10	M22-Ma11774	NCP	%	90			70-130	Pass	
TRH >C10-C16	M22-Ma16730	NCP	%	122			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-Ma11774	NCP	%	117			70-130	Pass	
Toluene	M22-Ma11774	NCP	%	93			70-130	Pass	
Ethylbenzene	M22-Ma11774	NCP	%	101			70-130	Pass	
m&p-Xylenes	M22-Ma11774	NCP	%	102			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	M22-Ma11774	NCP	%	104			70-130	Pass	
Xylenes - Total*	M22-Ma11774	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M22-Ma08779	NCP	%	95			70-130	Pass	
Acenaphthylene	M22-Ma08779	NCP	%	108			70-130	Pass	
Anthracene	M22-Ma08779	NCP	%	103			70-130	Pass	
Benz(a)anthracene	M22-Ma08779	NCP	%	89			70-130	Pass	
Benzo(a)pyrene	M22-Ma08779	NCP	%	94			70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ma08779	NCP	%	77			70-130	Pass	
Benzo(g.h.i)perylene	M22-Ma08779	NCP	%	100			70-130	Pass	
Benzo(k)fluoranthene	M22-Ma08779	NCP	%	104			70-130	Pass	
Chrysene	M22-Ma08779	NCP	%	96			70-130	Pass	
Dibenz(a.h)anthracene	M22-Ma08779	NCP	%	98			70-130	Pass	
Fluoranthene	M22-Ma08779	NCP	%	100			70-130	Pass	
Fluorene	M22-Ma08779	NCP	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ma08779	NCP	%	100			70-130	Pass	
Naphthalene	M22-Ma08779	NCP	%	90			70-130	Pass	
Phenanthrene	M22-Ma08779	NCP	%	96			70-130	Pass	
Pyrene	M22-Ma08779	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M22-Ma15075	NCP	%	107			75-125	Pass	
Barium	M22-Ma15075	NCP	%	102			75-125	Pass	
Beryllium	M22-Ma15075	NCP	%	103			75-125	Pass	
Boron	M22-Ma15075	NCP	%	86			75-125	Pass	
Cadmium	M22-Ma15075	NCP	%	119			75-125	Pass	
Chromium	M22-Ma15075	NCP	%	118			75-125	Pass	
Cobalt	M22-Ma15075	NCP	%	116			75-125	Pass	
Copper	M22-Ma15075	NCP	%	120			75-125	Pass	
Lead	M22-Ma18456	NCP	%	120			75-125	Pass	
Manganese	M22-Ma18456	NCP	%	117			75-125	Pass	
Mercury	M22-Ma15075	NCP	%	127			75-125	Fail	Q08
Nickel	M22-Ma15075	NCP	%	111			75-125	Pass	
Selenium	M22-Ma15075	NCP	%	115			75-125	Pass	
Titanium	M22-Ma15075	NCP	%	75			75-125	Pass	
Vanadium	M22-Ma15075	NCP	%	113			75-125	Pass	
Zinc	M22-Ma15075	NCP	%	89			75-125	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	M22-Ma21552	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M22-Ma18635	NCP	%	80			70-130	Pass	
1.1.1-Trichloroethane	M22-Ma18635	NCP	%	83			70-130	Pass	
1.2-Dichlorobenzene	M22-Ma18635	NCP	%	113			70-130	Pass	
1.2-Dichloroethane	M22-Ma18635	NCP	%	119			70-130	Pass	
Trichloroethene	M22-Ma18635	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M22-Ma11701	NCP	%	79			70-130	Pass	
4.4'-DDD	M22-Ma11701	NCP	%	114			70-130	Pass	
4.4'-DDE	M22-Ma11701	NCP	%	92			70-130	Pass	
4.4'-DDT	M22-Ma11701	NCP	%	77			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-HCH	M22-Ma11701	NCP	%	80			70-130	Pass	
Aldrin	M22-Ma11701	NCP	%	86			70-130	Pass	
b-HCH	M22-Ma11701	NCP	%	87			70-130	Pass	
d-HCH	M22-Ma11701	NCP	%	72			70-130	Pass	
Dieldrin	M22-Ma11701	NCP	%	86			70-130	Pass	
Endosulfan I	M22-Ma11701	NCP	%	84			70-130	Pass	
Endosulfan II	M22-Ma11701	NCP	%	85			70-130	Pass	
Endosulfan sulphate	M22-Ma11701	NCP	%	72			70-130	Pass	
Endrin	M22-Ma11701	NCP	%	84			70-130	Pass	
Endrin aldehyde	M22-Ma11701	NCP	%	83			70-130	Pass	
Endrin ketone	M22-Ma11701	NCP	%	80			70-130	Pass	
g-HCH (Lindane)	M22-Ma11701	NCP	%	77			70-130	Pass	
Heptachlor	M22-Ma11701	NCP	%	74			70-130	Pass	
Heptachlor epoxide	M22-Ma11701	NCP	%	73			70-130	Pass	
Hexachlorobenzene	M22-Ma11701	NCP	%	77			70-130	Pass	
Methoxychlor	M22-Ma11701	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M22-Ma16355	NCP	%	98			30-130	Pass	
2.4-Dichlorophenol	M22-Ma16355	NCP	%	102			30-130	Pass	
2.4.5-Trichlorophenol	M22-Ma16355	NCP	%	86			30-130	Pass	
2.4.6-Trichlorophenol	M22-Ma16355	NCP	%	101			30-130	Pass	
2.6-Dichlorophenol	M22-Ma16355	NCP	%	98			30-130	Pass	
4-Chloro-3-methylphenol	M22-Ma16355	NCP	%	105			30-130	Pass	
Pentachlorophenol	M22-Ma16355	NCP	%	90			30-130	Pass	
Tetrachlorophenols - Total	M22-Ma16355	NCP	%	77			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma16355	NCP	%	42			30-130	Pass	
2-Methyl-4.6-dinitrophenol	M22-Ma16355	NCP	%	43			30-130	Pass	
2-Nitrophenol	M22-Ma16355	NCP	%	110			30-130	Pass	
2.4-Dimethylphenol	M22-Ma16355	NCP	%	113			30-130	Pass	
2.4-Dinitrophenol	M22-Ma16355	NCP	%	53			30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ma16355	NCP	%	107			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma16355	NCP	%	107			30-130	Pass	
4-Nitrophenol	M22-Ma16355	NCP	%	72			30-130	Pass	
Dinoseb	M22-Ma16355	NCP	%	68			30-130	Pass	
Phenol	M22-Ma16355	NCP	%	99			30-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
1.2.4-Trichlorobenzene	M22-Ma19633	NCP	%	115			70-130	Pass	
1.4-Dichlorobenzene	M22-Ma19633	NCP	%	119			70-130	Pass	
2.4-Dinitrotoluene	M22-Ma19633	NCP	%	93			70-130	Pass	
Hexachlorobenzene	M22-Ma11701	NCP	%	77			70-130	Pass	
N-Nitrosodipropylamine	M22-Ma19633	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M22-Ma16565	NCP	%	107			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma16565	NCP	%	94			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma16565	NCP	%	117			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma16565	NCP	%	126			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma16565	NCP	%	112			50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma16565	NCP	%	124			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma16565	NCP	%	116			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroundecanoic acid (PFUnDA)	M22-Ma16565	NCP	%	120			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma16565	NCP	%	120			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma16565	NCP	%	129			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma16565	NCP	%	79			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M22-Ma16565	NCP	%	116			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma16565	NCP	%	122			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma16565	NCP	%	84			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma16565	NCP	%	101			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma16565	NCP	%	121			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma16565	NCP	%	118			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma16565	NCP	%	113			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ma16565	NCP	%	101			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma16565	NCP	%	120			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma16565	NCP	%	143			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma16565	NCP	%	127			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma16565	NCP	%	106			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma16565	NCP	%	51			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma16565	NCP	%	93			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma16565	NCP	%	129			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma16565	NCP	%	68			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma16565	NCP	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma16565	NCP	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma16565	NCP	%	122			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ma11773	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M22-Ma13084	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Ma13084	NCP	mg/kg	< 50	< 50	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C29-C36	M22-Ma13084	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Ma11773	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ma11773	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M22-Ma13084	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Ma13084	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Ma13084	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-Ma11773	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M22-Ma11773	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M22-Ma11773	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M22-Ma11773	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M22-Ma11773	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M22-Ma11773	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M22-Ma17114	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-Ma15074	NCP	mg/kg	4.2	4.4	4.0	30%	Pass	
Barium	M22-Ma15074	NCP	mg/kg	160	160	2.0	30%	Pass	
Beryllium	M22-Ma15074	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M22-Ma15074	NCP	mg/kg	19	26	31	30%	Fail	Q15
Cadmium	M22-Ma15074	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M22-Ma15074	NCP	mg/kg	35	37	4.0	30%	Pass	
Cobalt	M22-Ma15074	NCP	mg/kg	15	15	2.0	30%	Pass	
Copper	M22-Ma15074	NCP	mg/kg	14	13	9.0	30%	Pass	
Lead	M22-Ma15074	NCP	mg/kg	27	23	15	30%	Pass	
Manganese	M22-Ma15074	NCP	mg/kg	280	310	10	30%	Pass	
Mercury	M22-Ma15074	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M22-Ma15074	NCP	mg/kg	18	19	4.0	30%	Pass	
Selenium	M22-Ma15074	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Titanium	M22-Ma15074	NCP	mg/kg	39	51	25	30%	Pass	
Vanadium	M22-Ma15074	NCP	mg/kg	50	51	2.0	30%	Pass	
Zinc	M22-Ma15074	NCP	mg/kg	28	24	14	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M22-Ma08901	NCP	%	29	29	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	M22-Ma18704	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M22-Ma16797	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M22-Ma16354	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M22-Ma16354	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M22-Ma16354	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M22-Ma16354	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M22-Ma16354	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M22-Ma16354	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M22-Ma16354	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma16354	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M22-Ma16354	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M22-Ma16354	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M22-Ma16354	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M22-Ma16354	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma16354	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M22-Ma16354	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M22-Ma16354	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Picoline	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	M22-Ma16354	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dinitrotoluene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3-Methylcholanthrene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-HCH	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-HCH	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-HCH	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
g-HCH (Lindane)	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	M22-Ma16354	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma23682	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma23682	NCP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma23682	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma23682	NCP	ug/kg	< 5	< 5	<1	30%	Pass	

Comments

Eurofins | Environment Testing accreditation number 1261, site 18217 is currently in progress of a controlled transition to a new custom built location at 179 Magowar Road, Girraween, NSW 2145. All results on this report denoted as being performed by Eurofins | Environment Testing Unit F3, Building F, 16 Mars road, Lane Cove West, NSW 2066, corporate site 18217, will have been performed on either Lane Cove or new Girraween site

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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eurofins | Environment Testing

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IANZ # 1290

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Project Name: HEYBRIDGE
Project ID: IS3603018

Order No.:
Report #: 864101
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Mar 9, 2022 1:00 PM
Due: Mar 17, 2022
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail	Arsenic	Asbestos - AS4964	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Cyanide (total)	Lead	Manganese	Mercury	Nickel	Selenium	Titanium	Vanadium	Zinc	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Phenols (Speciated)	BTEX	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217		X																										
Brisbane Laboratory - NATA # 1261 Site # 20794																												
Mayfield Laboratory - NATA # 1261 Site # 25079																												
Perth Laboratory - NATA # 2377 Site # 2370																												
External Laboratory																												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																							
1	QC101_280122	Jan 28, 2022		Soil	M22-Fe33346	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X				X		X		X	
2	QC102_310122	Jan 30, 2022		Soil	M22-Fe33347										X								X	X	X		X	X	X		X
3	QC103_310122	Jan 30, 2022		Soil	M22-Fe33348		X																							
Test Counts						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1

eurofins | Environment Testing

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Rolleston, Christchurch 7675
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IANZ # 1290

Sample Receipt Advice

Company name:	Jacobs Group (Australia) P/L VIC
Contact name:	[redacted]
Project name:	HEYBRIDGE
Project ID:	IS3603018
Turnaround time:	5 Day
Date/Time received	Mar 9, 2022 1:00 PM
Eurofins reference	864101

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Harry Bacalis on phone : or by email: HarryBacalis@eurofins.com

Results will be delivered electronically via email to Antony Volcich - antony.volcich@jacobs.com.

Global Leader - Results you can trust

Appendix H. Contaminated Land Equipment Calibration Certificates

Instrument Quality Report
Interface Meter

Enqip #: 15729
Company: Jacobs Group (Australia) Pty Ltd
Consultant: [redacted]
PO #: IS360318
Certificate #: 23451

INSTRUMENT IDENTIFICATION

Instrument Type: Solinst Interface Meter
Model Number: 122
Serial Number: IM-0524

INSPECTION RECORD

Battery:	PASS	**Water Tone:**	PASS
Tape Condition:	PASS	**Hydrocarbon Tone:**	PASS

Tested By: Karl Monteiro **Test Date:** 21/01/2022

Equipment Calibration Form
MiniRAE 3000 PID

Enqip #: 15729

Company: Jacobs Group (Australia) Pty Ltd

Consultant: [redacted]

PO #: IS360318

Certificate #: 23449

INSTRUMENT IDENTIFICATION

Model Number: PGM 7320

Serial Number: 592-915895

INSPECTION RECORD

Flow Rate: PASS

Buzzer: PASS

Date & Time: PASS

CALIBRATION DETAILS

Parameters	Standard	Result
Air	0.0 ppm	0.0 ppm
Isobutylene	100.0 ppm	100.1 ppm

Alarm Limits: **High** 100 **Low** 50

Calibration Successful: YES

Calibrated By: Owen Hvalica **Test Date:** 21/01/2022

116 Thistlethwaite St, South Melbourne 3205
P 1300 218 987
E info@enqip.com.au | **W** www.enqip.com.au

Equipment Calibration Form
YSI ProPlus

Enqip #: 15729
Company: Jacobs Group (Australia) Pty Ltd
Consultant: [redacted]
PO #: IS360318
Certificate #: 23450

INSTRUMENT IDENTIFICATION

Model Number: 6050000
Serial Number: 170103037
Instrument Type: YSI ProPlus

INSPECTION RECORD

Batteries Checked:	PASS	**Date & Time:**	PASS
Electrodes Cleaned/Checked:	PASS	**Temperature:**	PASS

CALIBRATION DETAILS

Sensor	Cal Solution	Value	Reading
pH	Buffer 4.00	4.00 pH	3.99 pH
	Buffer 7.00	7.00 pH	7.00 pH
Redox	Standard ORP	228 mV @ 25 °C	227.9 mV
O_2	Zero Dissolved Oxygen	0.0 %	0.0 %
	Air	100.0 %	100.1 %
Conductivity	Standard Conductivity	2.76 mS/cm	2.76 mS/cm

Calibration Successful: YES

Calibrated By: [redacted] **Test Date:** 21/01/2022

Nuclear Australia Pty Ltd
7/3 Interchange Way
Carrum Downs, VIC 3201
ABN: 47 007 295 641

Web: www.nuclearaustralia.com.au
E-mail: info@nucleaustralia.com.au
Tel: +61 3 8770 6565

Certificate Number: 1460

Gamma Dose Rate Meter Calibration

Atomtex AT1125 SN: 6487

09 March 2021

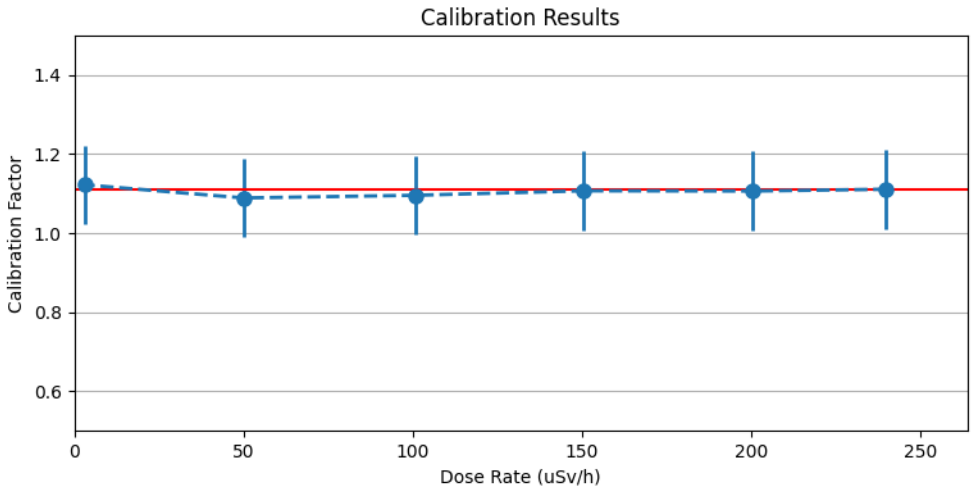
Method

The meter was received to Nuclear Australia's offices in Carrum Downs Victoria where it was checked for damage and then mounted to the Gamma Calibration System Model 4125 (S/N:0001). The focal point of the meter was aligned to the beam line of the GCS as per the manufacturer's instructions. The meter was then exposed to the beam of the Cs^{137} source and measurements were then taken to calculate the calibration factor of the meter.

Results

The calibration factor is:

$$1.11 \pm 0.01$$



Environment			
Temperature	**Relative Humidity**	**Barometric Pressure**	**Background Field Strength**
21.1°C	60%	1019 hPa	0.1µSv/h

Source Details		
Isotope	**Activity**	**Date of Measurement**
Cs^{137}	10 GBq (Attenuated)	November 2020

Calibrated By: Nuclear Australia Pty Ltd
Approved By: Jordan Boyle

JBoyle

09/03/2021

Calibration Data

Distance from Source (mm)	Meter Reading (µSv/h)	Actual Dose Rate (µSv/h)	Calibration Factor	Picture
1481	216	239.96	1.11	
1621	181	200.25	1.11	
1877	136	150.55	1.11	
2301	92	100.80	1.1	
3273	46	50.09	1.09	
2775 *	2.7	3.03	1.12	

* Additional Attenuation applied

SA Radiation Laboratory
82 Shipsters Rd
Kensington Park SA 5068
www.saradiation.com.au
+61 490 770 110

Contamination Meter Calibration Report

Report reference: **SAR CMC 20210312 SAR Ranger 05513**

Client Details

Contact	[redacted]
Company	SA Radiation
Address	82 Shipsters Rd
	Kensington Park SA 5068
Email	matt@saradiation.com.au

Instrument

Make	SE international
Model	Ranger
Serial number	05513
Date received	12/03/2021
Calibration date	12/03/2021
Next calibration due	12/03/2022

Results

Calibration Factor	Am-241 (α)	Am-241 (ɣ)	Cl-36 (β)
Bq/cps	9.9	224.5	5.0
Bq/cm^2/cps	0.55	12.41	0.28

Procedure reference	SAR SOP-CMC 2020a The calibration of the contamination meter is conducted using sources traceable to PTB and NIST Standards. The response to beta contamination is determined for an energy of 710keV. The response to gamma contamination is only valid for 60keV sources with a 100% yield. Refer to the instrument manual for its response to other energies and account for specific radionuclides yield.

Comments	The activity present on the surface of an item can be determined by multiplying the meter response (in cps) by the factors presented in the result table above. Contamination can be reported in Bq over the detector area or in Bq/cm2. The instrument was calibrated in its rubber protective case, without the window protector, recording cumulative counts over 1 minute and dividing that measurement by 60 for the determination of cps data.

Prepared by:	Mathieu Messeiller	Date:	12/03/2021
Position:	Director	Signature:	
Checked by:	Kent Gregory	Date:	12/03/2021
Position:	Director	Signature:	

SA Radiation Laboratory
82 Shipsters Rd
Kensington Park SA 5068
www.saradiation.com.au
+61 490 770 110

SA Radiation Pty Ltd

Calibration Data

Report SAR CMC 20210312 SAR Ranger 05513
Instrument: SE international / Ranger
Serial number: 05513
Detector area: 18.10 (cm^2)
Calibration date: 12/03/2021
Calibrated by: Mathieu Messeiller

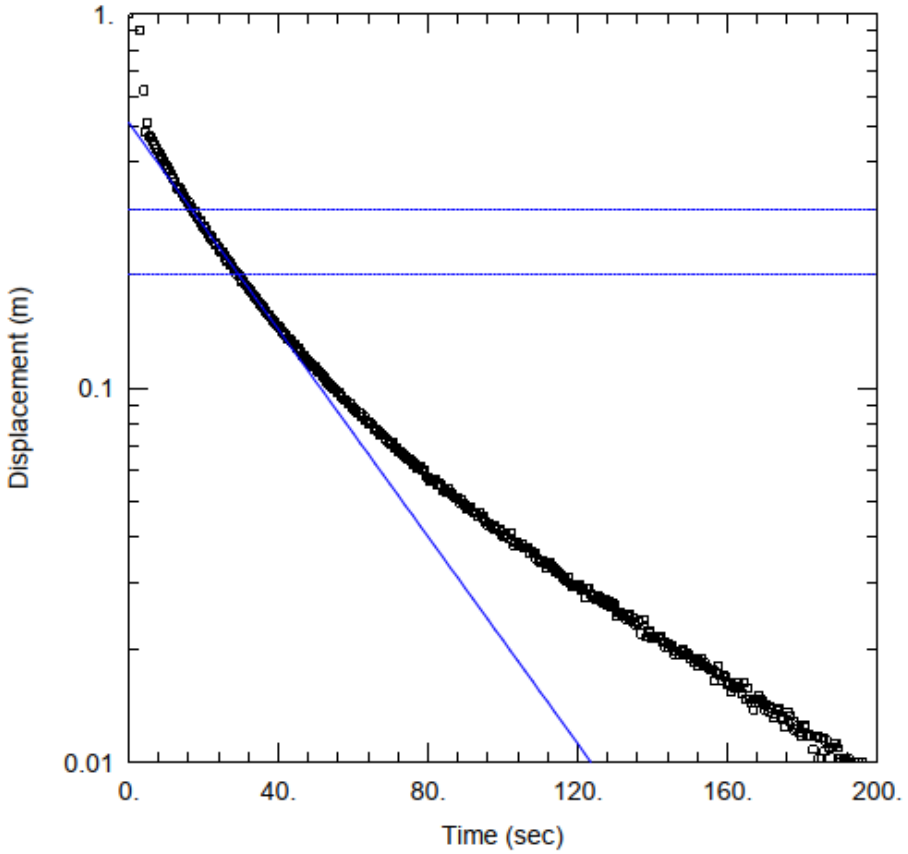
Calibration sources	α source	γ source	β source
Radionuclide	Am241	Am241	Cl-36
Serial number	DL508	DL508	DL509
Source area (cm^2)	100	100	100
Original activity (Bq)	853	853	3080
Original emission rate (s^{-1})	405	145.8	1940
Date	13/05/1993	13/05/1993	26/05/1993
Half-life (years)	432.7	432.7	300000
Current activity (Bq)	816	816	3080
Current detectable emission rate (s^{-1})	70	25	351

Measurements						
Background *		Am-241			Cl-36	
(α + γ)	(β)	(α + γ)	(γ)	(α)	(β)	
cps	cps	cps	cps	cps	cps	
0.7	0.7	15.7	1.0	14.7	112.7	
0.7	0.7	16.5	1.0	15.6	112.7	
0.7	0.7	16.0	0.8	15.2	112.9	
0.7	0.7	17.1	0.9	16.2	112.8	
0.6	0.6	15.0	0.9	14.2	111.0	
0.7	0.7	15.5	1.0	14.5	115.8	
0.7	0.7	16.3	1.0	15.3	111.6	
0.8	0.8	15.0	1.0	14.0	112.6	
0.7	0.7	15.3	1.0	14.3	110.2	
1.0	1.0	15.9	1.1	14.8	112.8	
0.7	0.7	15.8	1.0	14.9	112.5	Average
		15.1	0.2	14.9	111.8	Average (less background)

* for non-discriminating contamination meters, the background for (α + γ) is identical to the background for (β)

Calibration parameter	Am-241 (α)	Am-241 (γ)	Cl-36 (β)
Calibration factor (Bq/cps)	9.9	224.5	5.0
Calibration factor (Bq/cm^2/cps)	0.5	12.4	0.3

Appendix I. Hydraulic Testing



HB-BH02-C-01

Data Set: J:\...\BH02-FHT1.aqt
Date: 03/24/22 Time: 14:47:39

PROJECT INFORMATION

Company: Jacobs
Client: Tas Networks
Project: IS360300
Location: Heybridge
Test Well: HB-BH02-C-02
Test Date: 16/02/2022

AQUIFER DATA

Saturated Thickness: 20. m Anisotropy Ratio (Kz/Kr): 0.1

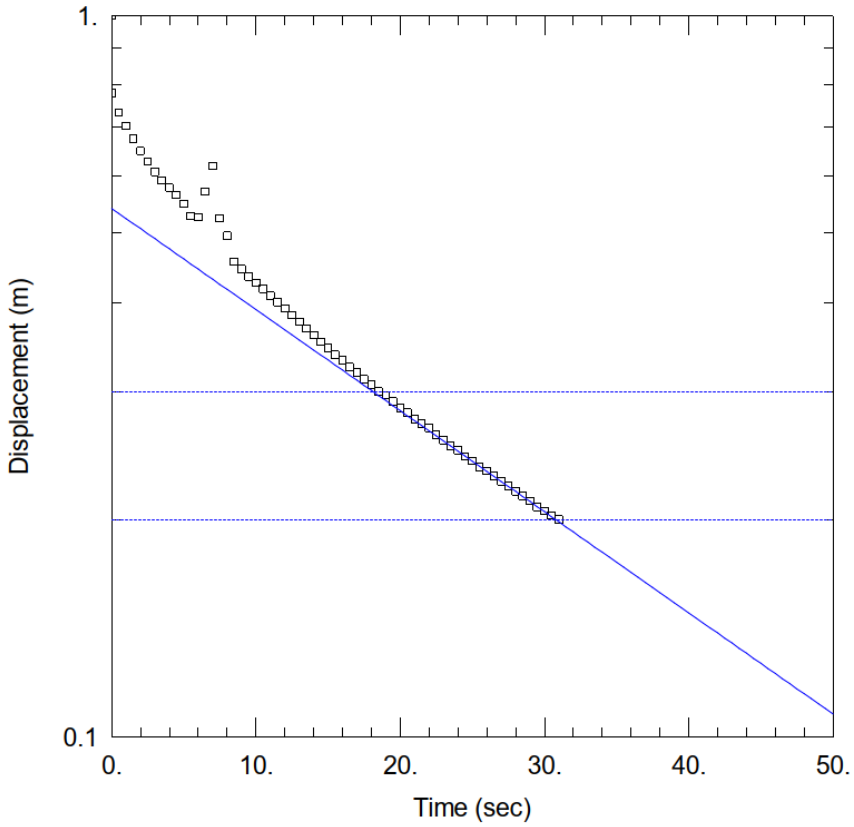
WELL DATA (HB-BH02-C-01)

Initial Displacement: 1. m
Total Well Penetration Depth: 6.04 m
Casing Radius: 0.025 m
Static Water Column Height: 6. m
Screen Length: 4. m
Well Radius: 0.048 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.8903 m/day y0 = 0.512 m



HB-BH02-C-01

Data Set: J:\...\BH02-RHT1.aqt
Date: 03/24/22 Time: 14:48:48

PROJECT INFORMATION

Company: Jacobs
Client: Tas Networks
Project: IS360300
Location: Heybridge
Test Well: HB-BH02-C-02
Test Date: 16/02/2022

AQUIFER DATA

Saturated Thickness: 20. m Anisotropy Ratio (Kz/Kr): 0.1

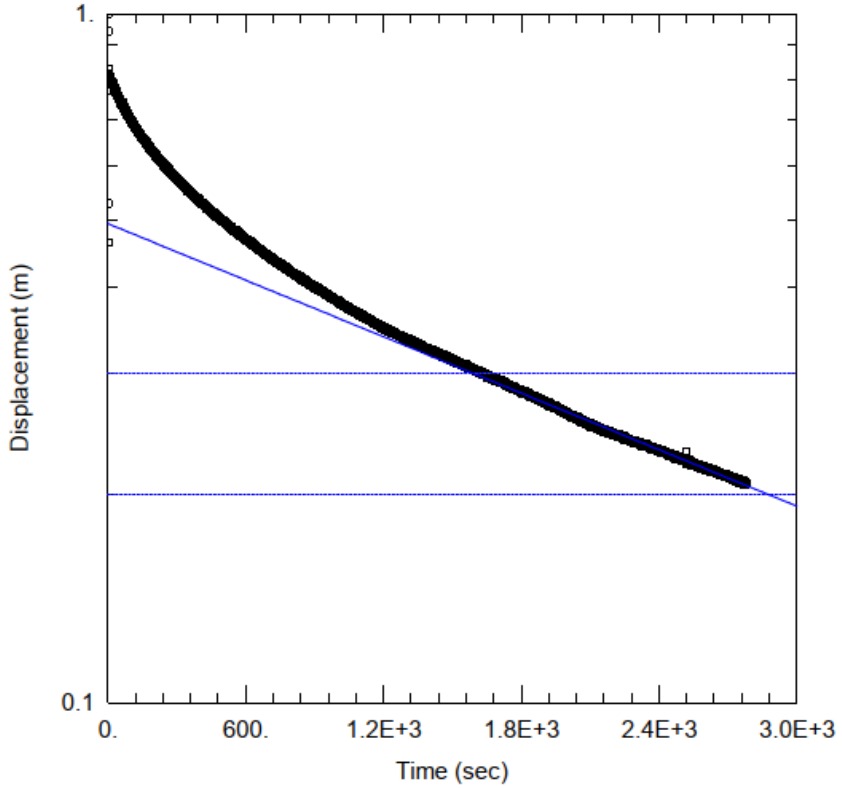
WELL DATA (HB-BH02-C-01 (RHT))

Initial Displacement: 1. m
Total Well Penetration Depth: 6.04 m
Casing Radius: 0.025 m
Static Water Column Height: 6. m
Screen Length: 4. m
Well Radius: 0.048 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.9025 m/day y0 = 0.5402 m



HB-BH03-C-01

Data Set: J:\...\BH03-FHT1.aqt
Date: 03/24/22 Time: 14:49:42

PROJECT INFORMATION

Company: Jacobs
Client: Tas Networks
Project: IS360300
Location: Heyrbridge
Test Well: HB-BH03-C-01
Test Date: 16/2/2022

AQUIFER DATA

Saturated Thickness: 20. m Anisotropy Ratio (Kz/Kr): 0.1

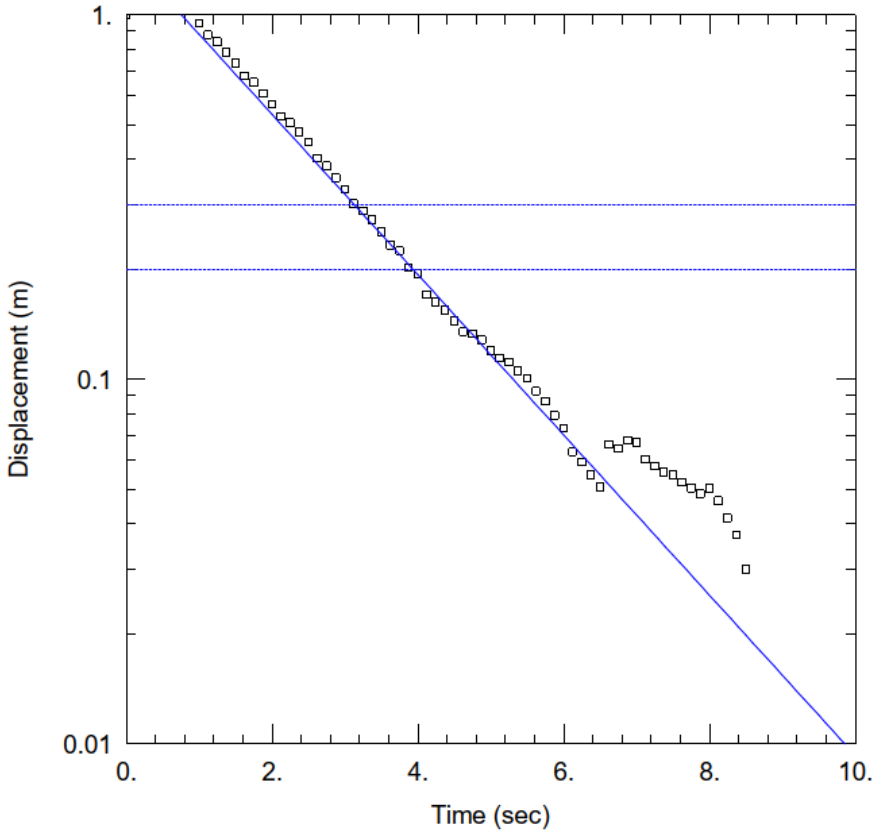
WELL DATA (HB-BH03-C-01)

Initial Displacement: 1. m
Total Well Penetration Depth: 6.85 m
Casing Radius: 0.025 m
Static Water Column Height: 6.85 m
Screen Length: 3.9 m
Well Radius: 0.048 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.009146 m/day y0 = 0.4955 m



HB-BH06-C-01

Data Set: J:\...\BH06-FHT1.aqt
Date: 03/24/22 Time: 14:50:30

PROJECT INFORMATION

Company: Jacobs
Client: Tas Networks
Project: IS360300
Location: Heybridge
Test Well: HB-BH06-C-01
Test Date: 16/02/2022

AQUIFER DATA

Saturated Thickness: 20. m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (HB-BH06-C-01)

Initial Displacement: 1. m
Total Well Penetration Depth: 13.32 m
Casing Radius: 0.025 m
Static Water Column Height: 9.32 m
Screen Length: 4.8 m
Well Radius: 0.048 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 13.22 m/day y0 = 1.466 m

Appendix J. Marinus Link Cable Landing Site Geophysical Investigation Report

GBG Australia Pty Ltd
28/7 Salisbury Road,
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Tel: (02) 9890 2122. Fax: (02) 9890 2922.
E-Mail: simon@gbgoz.com.au
ABN 77 009 550 869

Report

MARINUS LINK CABLE LANDING SITE - GEOPHYSICAL INVESTIGATION, HEYBRIDGE, TASMANIA

Date: 5 April 2022

Job Number: 2515

DRAFT REPORT: Rev 1

SHALLOW

GEOPHYSICAL

INVESTIGATIONS

DETAILS

Project Number:	GBGA2515
Document Title:	Marinus Link Cable Landing Site Geophysical Investigation
Site Address:	Heybridge, Tasmania
Client Details:	[redacted]
Client Address:	

DOCUMENT HISTORY

Revision	Prepared by	Reviewed by	Date issued
[redacted]			
[redacted]			

DISTRIBUTION

Revision	Electronic	Paper	Issued to	Date issued
[redacted]				
[redacted]				

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1 INTRODUCTION

At the request of Jacobs Group (Australia) Pty Ltd (Jacobs), GBG Australia Pty Ltd (GBG) conducted a seismic refraction survey over ten transects at the site of the proposed Marinus cable connection link in Heybridge, North Tasmania.

The seismic refraction data collected has been used to provide in-situ rock depth and strength assessment via P wave velocity models of the subsurface to a maximum depth of 22 m below surface level. This geophysical investigation forms part of a broader geotechnical scope which will inform the design of the proposed electrical cable landing for the cable crossing of the bass strait to Victoria. This report describes the data collection techniques and presents the results of the geophysical investigation.

2 GEOPHYSICAL INVESTIGATION SITE

The investigation area was composed of two investigation sites.

- Site 1 was on the Southern side of the highway in what will be the substation / conversion site and consisted of 5 profile lines across and along the two proposed routes. Each profile was approximately 141m long or 1 full seismic spread.

- Site 2 was located on the beach between the low tide mark and the rail line paralleling the highway. 5 profiles of 141m were collected in this area both along and across the proposed cable routes. Both sites are located adjacent to the Lyle Highway, Tarraleah, Tasmainia.

Figure 1 overleaf illustrates the investigation area. Seismic Refraction Tomography (SRT) lines are presented in blue with the logged borehole locations marked with red circles. Drawing GBGA2415_01 in Appendix A provides a clearer aerial view of the sites, line locations and boreholes.

Data acquisition was completed between+ the 8th to 11th February 2022 by a two-man crew comprised of one Senior geophysicist and one junior geophysicist.

Data acquisition on site was influenced by site conditions including but not limited to; seismic noise from the traffic on the highway and railway. Wave action noise from the ocean, a shallow trawler fishing vessel offshore for 4 hrs on the 10th of February and a consecutive drilling campaign being undertaken at the same time. Of the above, the traffic noise was the most problematic and caused some delays in collecting data whilst the crew waited for optimal conditions with no truck movements to limit noise on a stack shot. Even with the best care taken, and 20 stacks recorded, noise on the last 6 to 8 geophones in the off-end shots and the first internal shots, has made picking first breaks from these geophones almost impossible. Thus, lowering the achieved penetration.

Line placement was determined from original client direction along with onsite client direction. Where the original line placement was not possible, lines were moved to the closest location as best fit and signed off from the onsite manager

Figure 1: Site Map. Presenting SRT lines (blue) and borehole locations (red circles), Heybridge Marinus cable link site.

3 DATA ACQUISITION

The following section outlines the survey setup, methodology and equipment required for the technique utilised during the investigation.

The project objectives were as follows:

- Seismic Refraction Tomography (SRT) – Undertaken to supply subsurface P wave velocities used to outline and delineate bedrock level and ripability for proposed trenching or HDD design for cable onshoring.

3.1 SEISMIC REFRACTION TOMOGRAPHY (SRT)

3.1.1 Theory

Seismic refraction measures seismic compressional waves (P waves), which propagate through a medium and refract at each interface where there is a contrast in refractive index. P wave velocities are important for engineering purposes because the velocity is controlled by the fundamental parameters of elastic strength and density, but also rigidity and compressibility. Compressional wave velocity along with shear wave velocity is also an integral component of calculating Young's Modulus, Bulk Modulus and Poisson's Ratio. The P wave is calculated using:

$$Vp = \sqrt{\frac{K + \frac{4}{3}\mu}{\rho}}$$

Where, K is the Bulk Modulus, μ is the Shear Modulus, and ρ is Density.

3.1.2 Methodology

SRT data was acquired over 10 lines (as seen in Figure 1 in blue). Geophones were used in a 48-channel setup for all lines. Seismic energy for the profiles was provided from either an accelerated weight drop called a PEG40 (40kg hammer accelerated into an aluminium plate) or in areas where this could not be used due to lack of vehicle access, (The PEG is supported on a Ute towing hitch) stacked and summed blows of a 6.5kg sledgehammer.

Seismic spread geophone spacings were at 3 m intervals using 10 Hz geophones generally on spikes. But in areas where penetration with the spike could not be achieved up to 8 geophones were bolted to rock plates. The maximum array length was 141m, equivalent to 1 full 48 channel spread. Shot locations were calculated as a function of 2-3 geophone spacings, with the off-end shot distances calculated as a function of the total required investigation depth and the available accessible space. The furthest programmed off end shot was 25.5m from the first geophone. However, because of access constraints on site (physical roads, fences, ocean) many profiles only achieved a 13.5m off end shot. The photographs provided below in Figure 2 show a variety of the site conditions encountered.

Figure 2: Busy rail line and other side of that is main highway, Geotechnical drilling occurring on site caused minimal disruption due to liaison between geophysics and geotechnical teams

For further information on the SRT method please refer to the attached theory in appendix B of this document.

4 GEOPHYSICAL DATA QUALITY AND PROCESSING

4.1 SEISMIC REFRACTION TOMOGRAPHY (SRT)

4.1.1 Data Quality

Data quality was satisfactory. However, much of the dataset was influenced by background noise from the nearby highway, rail line and ocean wave noise. P Wave first break arrivals times were visible throughout the majority of the 48 channels for internal shots. However, with off-end shots, the far end 6 to 8 geophones were often overwhelmed by background noise that no amount of stacking could compensate for to enhance the seismic signal.

4.1.2 Data Processing

The seismic refraction data was processed using Rayfract (V3.35 Intelligent Resources Inc, 2017). The first arrival travel-times (breaks) for each seismic record were picked. A smooth minimum-structure initial model was then generated directly from the seismic refraction first break picks using a gradient initial model with velocity increasing with depth. The initial model was then refined with true 2D Wave-path Eikonal Travel-time (WET) tomography for the gradient models. The inversion algorithm was run for 20 iterations until adequate convergence between the initial model and inverted data occurred.

The final P wave velocity sections generated from the Rayfract inversion were compiled and gridded in Surfer (v22 Golden Software, 2021). The sections show variations in the modelled P wave seismic velocity as per the colour contour scale.

Large earth moving machines for civil works have been catalogued with their ability to excavate material based on material type and P wave velocity. Caterpillar grades ripability based on Seismic velocities which are shown in the example table below.

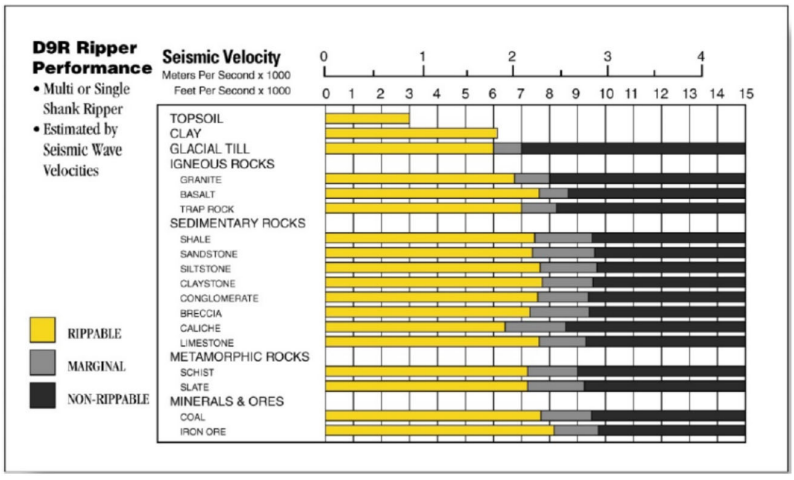


Figure 3: Ripabilty index example from the Caterpillar Handbook

5 RESULTS AND INTERPRETATION

The results of the geophysical investigation carried out for Jacobs Group (Australia) at the Heybridge Marinus Link site have been provided in the following drawings attached in Appendix A of this report:

- GBGA25144_01 – Site map
- GBGA25144_02 – Seismic profiles 1, 2 & 5
- GBGA25144_03 – Seismic profiles 6 & 7
- GBGA25144_04 – Seismic profiles 3 & 4
- GBGA25144_05 – Seismic profiles 8,9 & 10

Drawing GBGA2414_01 is a site map with the location of each profile collected showing their geospatial relationship. It also contains the position of all the boreholes undertaken on site where the information has been supplied to GBGA by Jacobs Australia Pty Ltd.

5.1 Seismic Refraction Velocity Profiles

Seismic datasets are provided in five (5) drawings, each drawing displays a 2D P wave layer velocity profile with total depth achieved below ground level ranging between -15m to -25m. Profiles are best viewed with reference to the small insert map on each drawing and the start and end positions shown on the profiles. The title of the profiles on the main site map are always located at the zero end of the profile.

5.2 Comment on the Velocity Models

All of the geophysical profiles show a generally shallow layer of low velocity material between the surface and approximately 1 to 4m depth. Based on the borehole information this would appear to equate to the layer of sand/gravel alluvial sediments sitting above the bedrock. The bedrock surface is reasonably uniform across the site. The P wave velocities modelled in the bedrock vary from 1000m/s near the surface in what would be the weathered zone to 5000m/s at depth. This would be considered extremely hard siltstone, although not out of the realms of possibility.

The velocities modelled in the siltstone appear to be modified by the geology, which from site photographs and the aerial view from Google Earth Pro appears to show sub vertical bedded deposits were exposed on the beach (Refer figure 4 overleaf).

Figure 4: siltstone bedrock on beach showing Sub vertical bedding, the strike (yellow arrow) runs North nor east to South Sou west

We have found from previous experience that near vertical beds of alternating softer and harder material can cause discrete high velocity and low velocity zones with limited lateral extent that result from linear profiles crossing the beds at angles perpendicular to the strike.

The aerial images from Google Earth Pro and site photographs indicate the geology in this location has preferential weathering of material, suggesting harder layers and softer layers of rock. The dip for the layers is to the southwest and appears to be around 60 to 70 degrees. The strike for the beds is north northwest to south southeast. The collected profiles generally run perpendicular to the strike (so along the dip or oblique to it).

Some of the velocity profiles collected appear to exhibit this particular feature where higher velocity zones match areas of exposed rock outcrop in the surf zone and then dip away in areas where the rock is not present in the surf area. for example, profile HB6 and 7 from chainage 70m to the end of the profiles.

Within profiles HB3 and HB4 there are two marked locations where the picked velocity of 1000m/S appears to come to the surface. These are not outcrops. Within this investigation area there are a considerable number of buried foundations and building slabs, and these may be creating these anomalies within the section by affecting the refracted first break.

Within the profile HB7 there is another location where the velocity contour breaks surface. No visible surface expression of rock was noted at this location, but the rock could potentially be within 500mm of the surface.

Profile HB10 was the only profile collected heading into the sea and the data from the ocean end of the profile between chainages 110m to 130m was not very good due to the wave noise and no off-end shots beyond 130m could be achieved. As such we do not have high confidence in the velocity model created in this chainage location.

6 CONCLUSIONS

Ten seismic refraction profiles of 141m in length were collected at various locations along the proposed cable onshoring route for the Marinus Cable link at Heybridge in North Tasmania. The data was collected over 4 to 5 days on site using a mix of accelerated weight drop source and hammer source for seismic energy.

Because of the ambient noise generated by the highway and rail lines crossing the proposed easement and geometry of the profiles butting up against safety fences limiting offend shot access. The maximum depth of information obtained from these profiles is 25m below ground level.

Considering the noise and physical limitations on site set out above the seismic velocity profiles created from the picked first break refractors indicate a fairly uniform subsurface velocity model with a thin near surface layer of low velocity material 1 to 4m thick overlaying a material with velocities rapidly increasing with depth from 1000m/s near surface to up to 5000m/S at depth. the drill logs provided appear to correlate with this model with alluvial sediments overlaying siltstone over all of the drill holes provided.

Velocities in the 4000 – 5000m/S range for siltstone is very high and should be treated with some caution when assessing likely rock hardness based on the velocities. We would recommend that further physical investigation of these area is undertaken if they are within the depth range of any proposed horizontal bore or tunnelling.

There also appears from the velocity models to be zones of lower velocity rock material sitting between zones of higher velocity material that do appear to match up with visible areas of rock outcrop and blocks of missing rock in the surf zone where preferential weathering appears to be occurring.

For and on behalf of GBG Group

Simon Williams

Director / Principal Geophysicist - BSc (Geology/Geophysics),

Appendix A: - Drawings

Seismic Refraction Tomography Line Locations

NOTES:

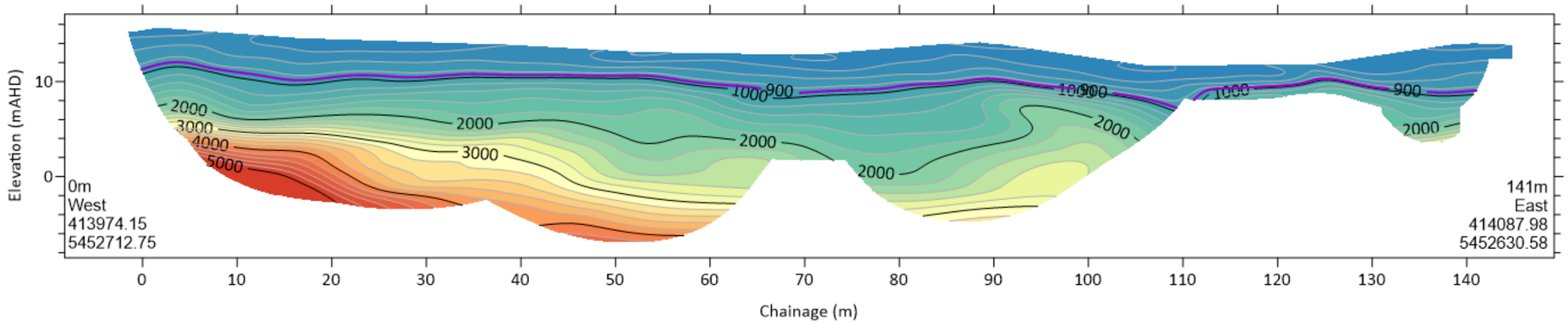
SRT Line

BH06 Borehole Location and Name

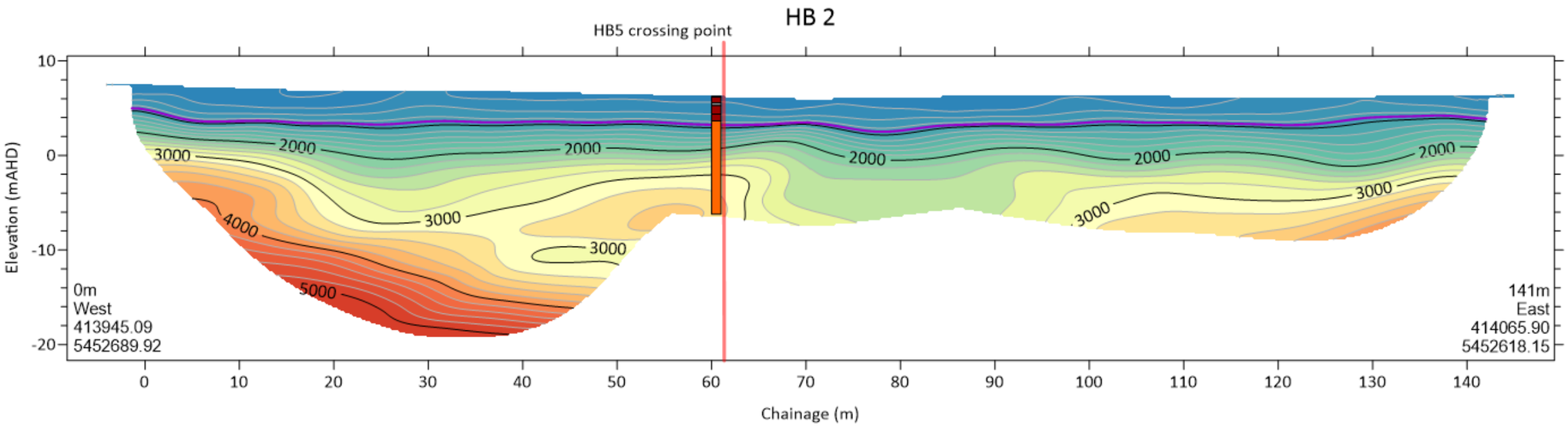
CLIENT: JACOBS		DATE: 04/04/2022	DATUM: GDA2020 UTM55S
TITLE: PROJECT MARINUS HEYBRIDGE CABLE LANDING, HEYBRIDGE TASMANIA		SCALE: 1:2000	DRAWN: BW
		DRG No: GBGA2415_01	REV: DRAFT

GBGGROUP
GBG Australia Pty. Ltd.
28/7 Salisbury Road,
Castle Hill, NSW 2154
Telephone: (02) 9890 2122
Email: info@gbgoz.com.au

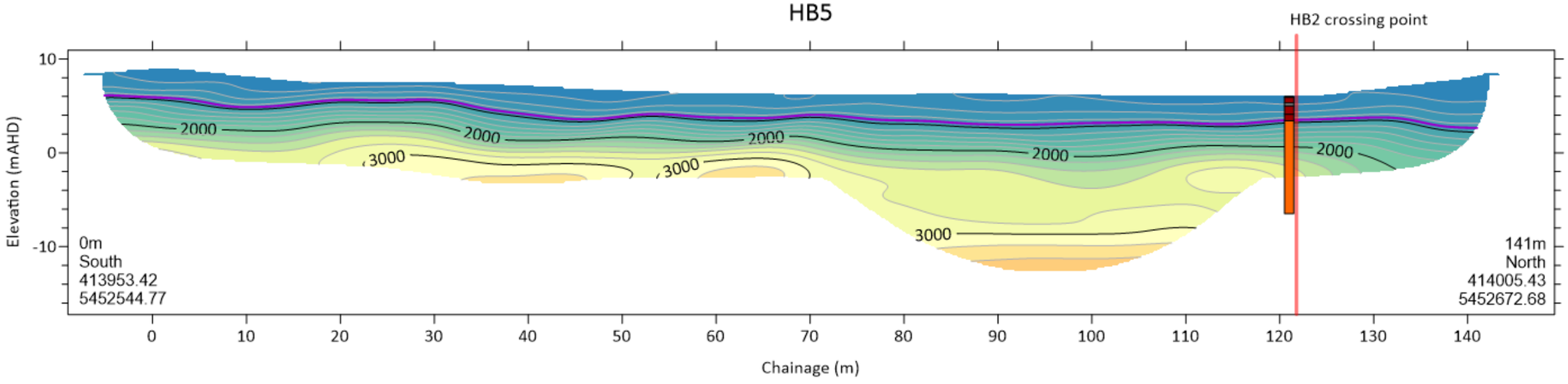
HB 1



HB 2



HB5

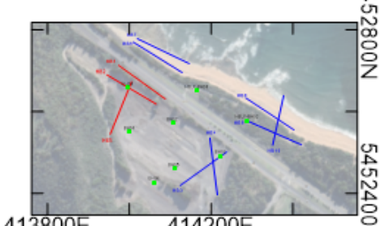


P-Wave Velocity (m/s)

5000
4800
4600
4400
4200
4000
3800
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0

GRAVEL
SILT
SAND
WEATHERED SILTSTONE
SILTSTONE

Interpreted Bedrock Contour



NOTES:

CLIENT: JACOBS		DATE: 04/04/2022	DATUM: GDA2020 UTM55S
TITLE:	PROJECT MARINUS HEYBRIDGE CABLE LANDING, HEYBRIDGE TASMANIA	SCALE: 1:500	DRAWN: BW
		DRG No: GBGA2515_02	REV: DRAFT

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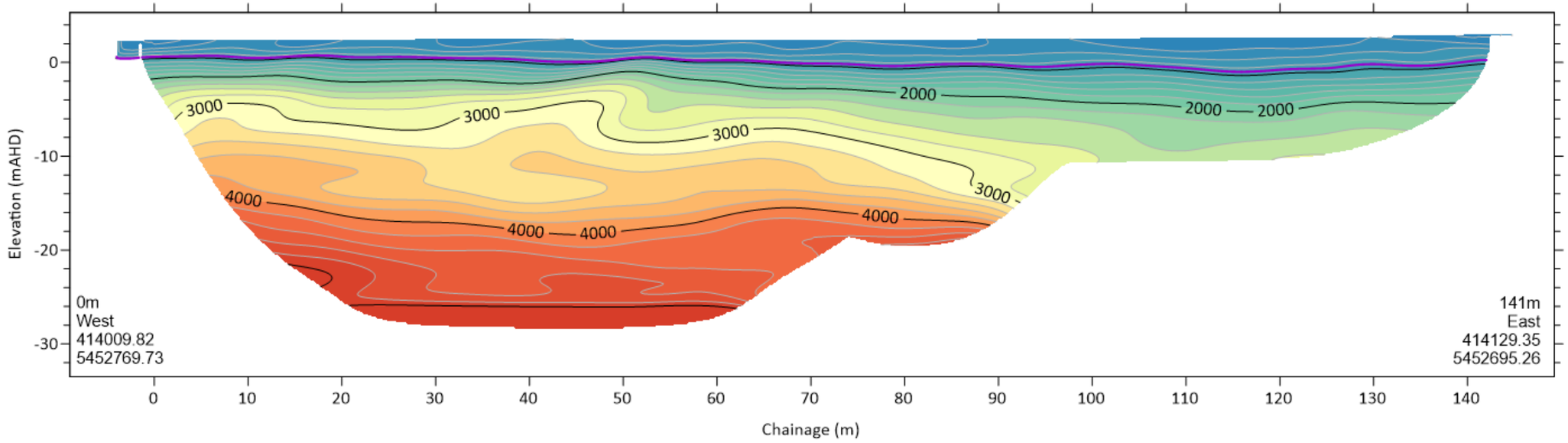
HB 6



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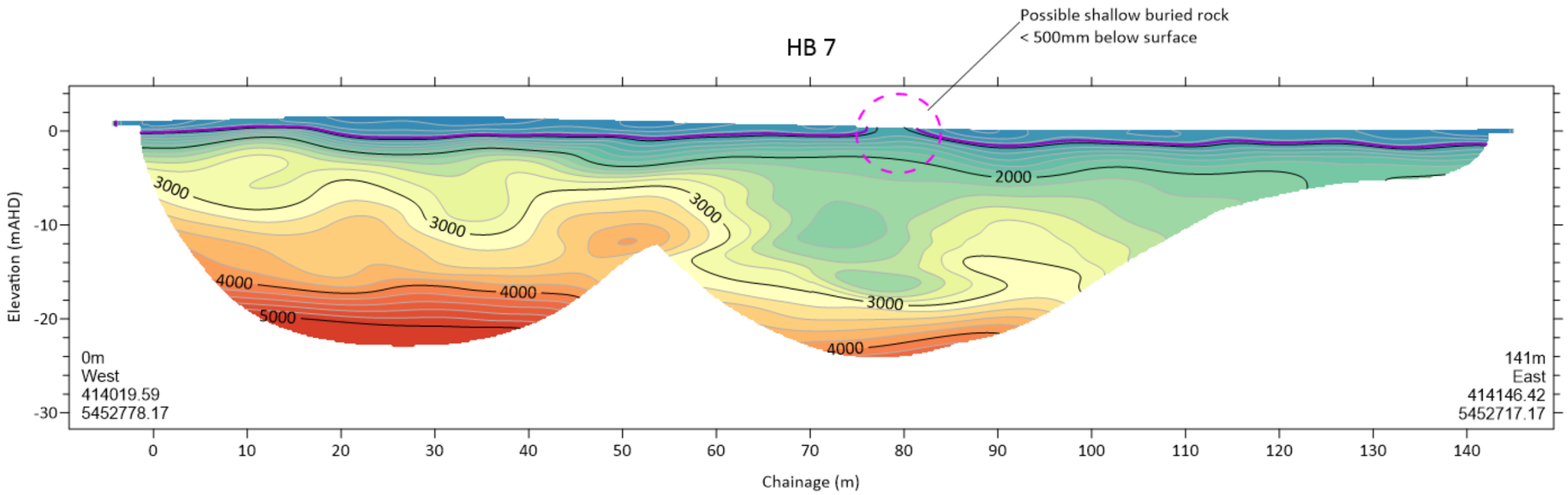
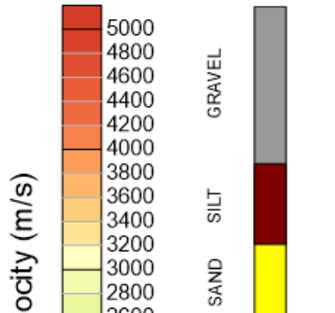
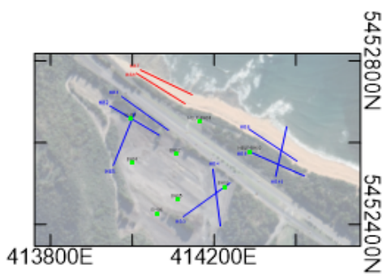




Interpreted Bedrock Contour



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TITLE:	PROJECT MARINUS HEYBRIDGE CABLE LANDING, HEYBRIDGE TASMANIA	SCALE: 1:500	DRAWN: BW
		DRG No: GBGA2515_03	REV: DRAFT

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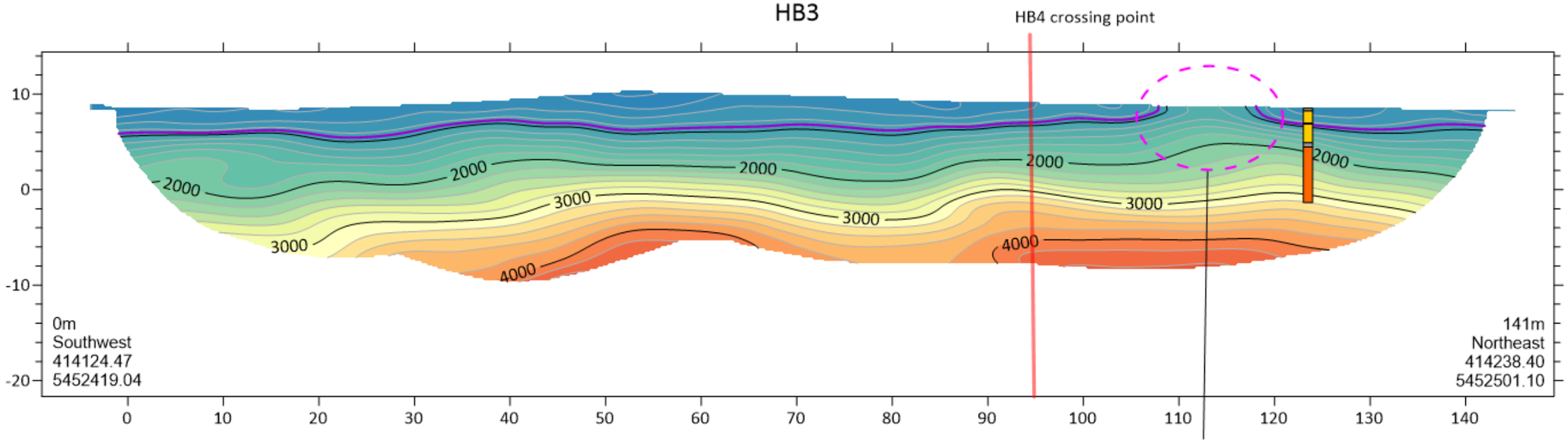
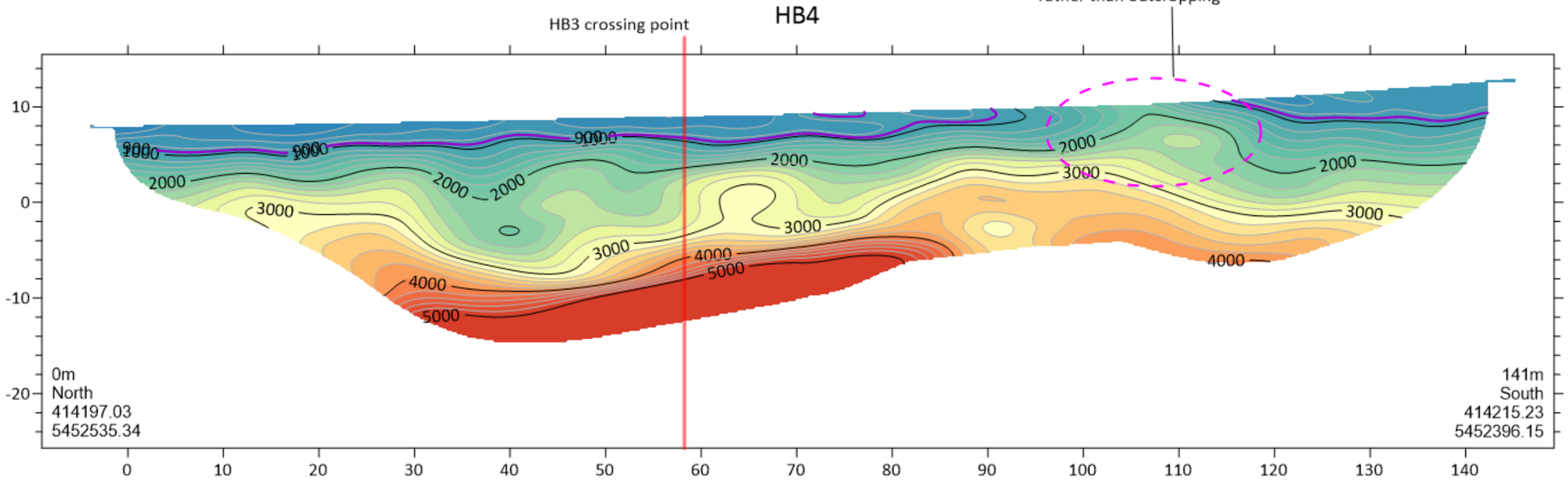
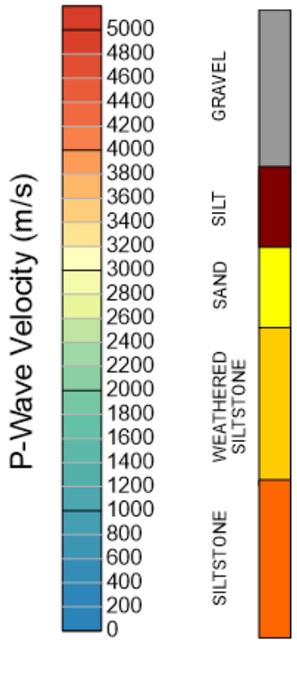
HB3



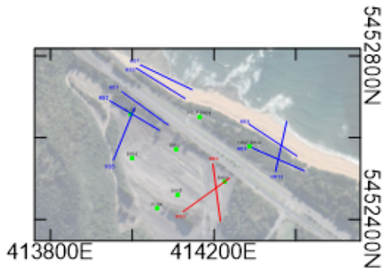
Likely to be the result of concrete structure near surface rather than outcropping

HB4





Interpreted Bedrock Contour



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		DRG No: GBGA2515_04	REV: DRAFT

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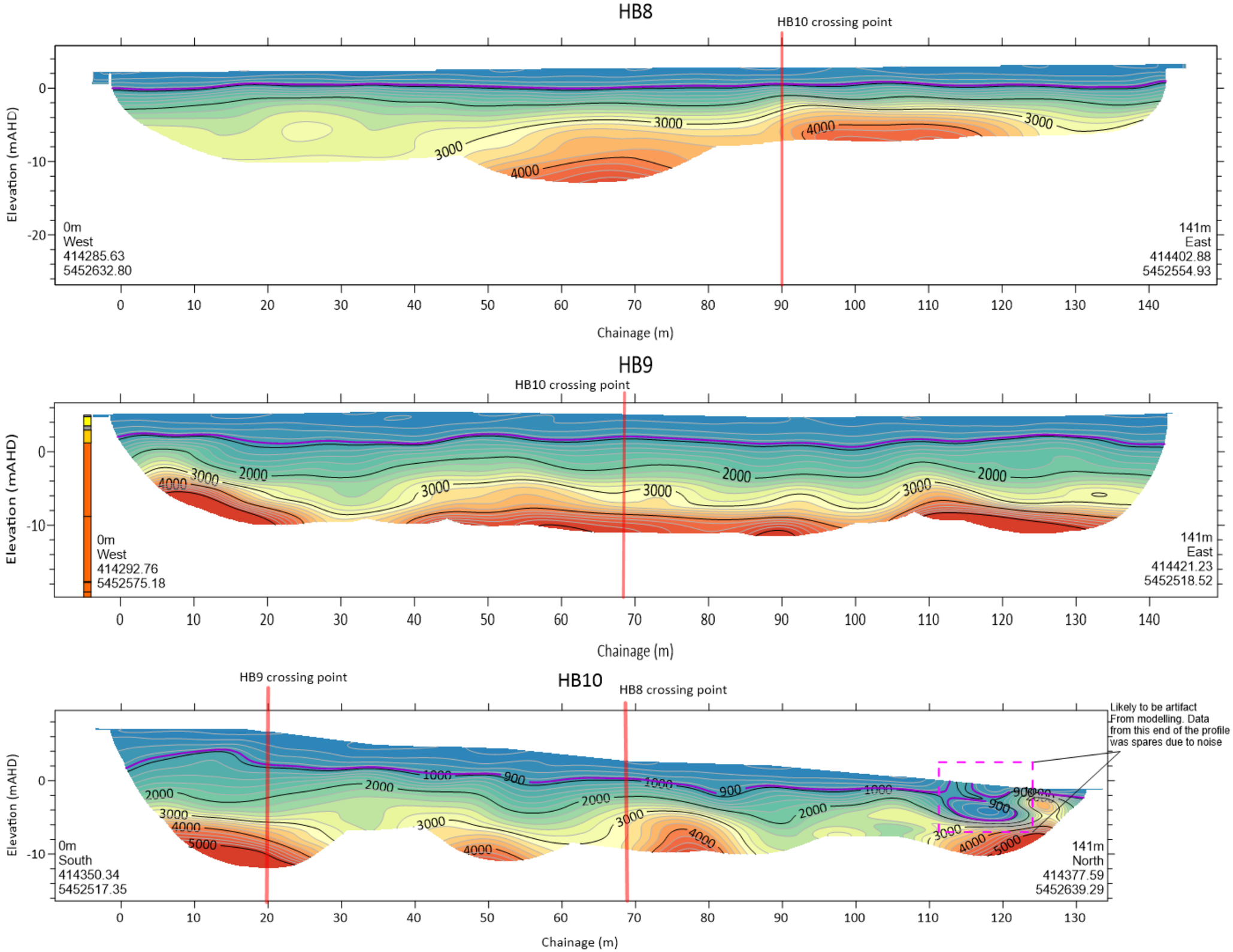

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Appendix B: – Method

APPLICATIONS

- ✓ Bedrock mapping
- ✓ Mapping weathered zones
- ✓ Stratigraphic mapping
- ✓ Indicative material hardness for piling, tunnelling and excavation works
- ✓ Identification of fault / fractured zones

METHOD

The Seismic Refraction method involves the measurement of travel times of seismic compressional waves (P waves) that are generated at the surface, propagate through the subsurface and return to the surface after being refracted at the interface between layers of contrasting seismic velocity. Seismic wave velocities are controlled by the fundamental parameters of elastic strength and density of the material it propagates through.

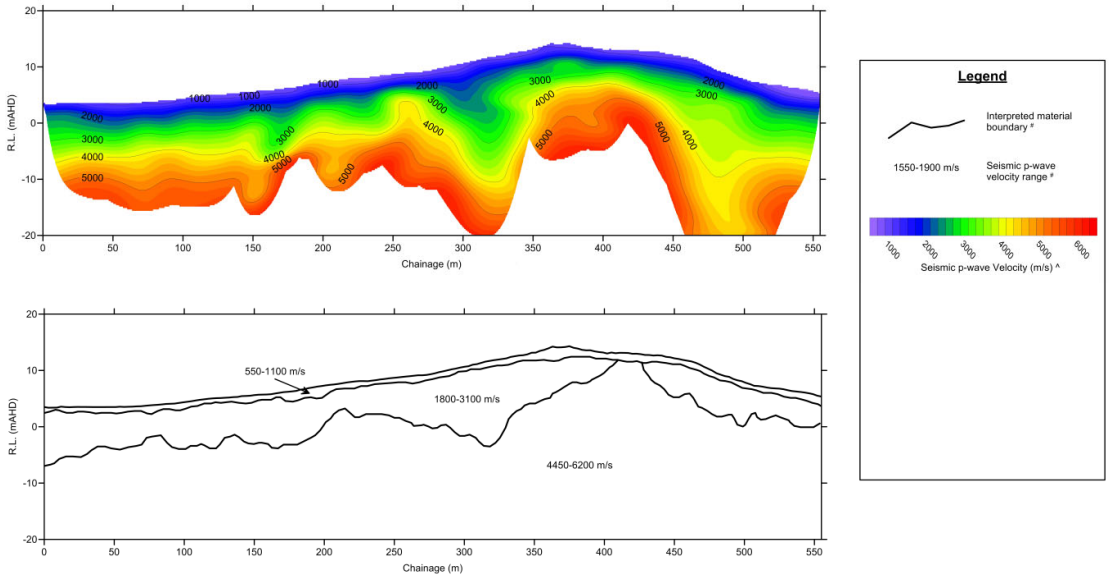
For near surface investigations seismic energy is generated on the surface using a sledgehammer. More powerful sources such as accelerated drop weight, down-hole air gun, or explosives are required for deeper investigations. The generated seismic waves propagate through the subsurface at a certain velocity. On reaching a geological boundary marked by an increase in seismic velocity, at a specific angle the wave is critically refracted and travels along the top of the lower layer at a greater velocity. This generates head waves in the upper layer which return to the surface where it is detected as vibrations by a linear array of geophones spaced at regular intervals.

By measuring the travel times of these refracted waves from multiple source points to multiple receivers, the seismic refraction method can resolve lateral changes in the depth to the top of a refracting interface as well as the seismic velocity within it. Furthermore, being related to elastic strength and density, the velocities calculated from a seismic refraction survey can be a useful guide to the ripability of a rock for excavation.

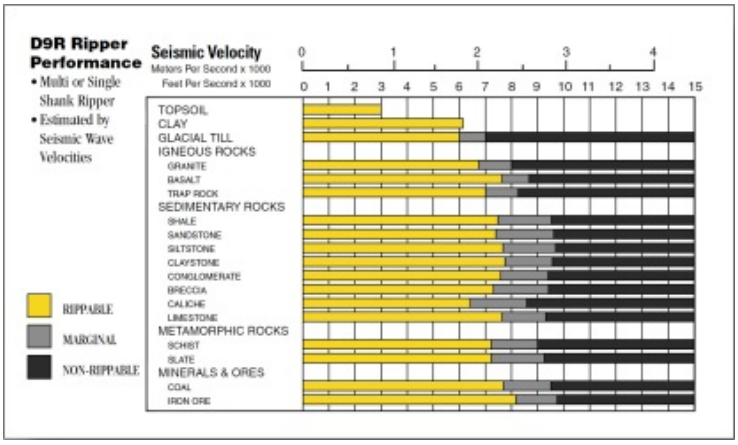
DATA ANALYSIS & PRESENTATION

Processing and analysing seismic refraction data can be conducted using a layered model assuming distinct refractive boundaries or tomographic approach assuming a gradual increase in seismic velocity with depth. Both approaches have benefits and are typically conducted in unison to generate the most detailed geological model possible.

The output is a cross-section showing lateral changes in the depth to the various refracting interfaces and the seismic velocities within them. When correlated with core logs, this information can be related to geological boundaries in the subsurface. This can be particularly useful for planning excavation with the depth to the different layers giving an idea of quantity of rock needed to be removed and the seismic velocities giving an idea of the rock's hardness and hence ripability.



Modelled seismic p wave velocity section (top) and corresponding layer model section (bottom)



Ripability chart, displays the relationship between ripability and P wave velocity, taken from Handbook of Ripping, Twelfth Edition, Caterpillar Inc. 2000.