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
Heavy Metals	Sydney	Dec 20, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
USA Leaching Procedure	Sydney	Dec 20, 2023	14 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 20, 2023	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1055212
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Dec 18, 2023 10:49 AM
Due: Jan 10, 2024
Priority: 10 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: WATERLOO REMEDIATION - STAGE 1
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Benzo(a)pyrene	Lead	Mercury	Nickel	USA Leaching Procedure
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	VTP54_0.5	Nov 29, 2023		US Leachate	S23-De0043835			X		X
2	VTP54_1.5	Nov 29, 2023		US Leachate	S23-De0043836			X		X
3	VTP41_2.5	Nov 29, 2023		US Leachate	S23-De0043837		X	X		X
4	VTP46_1.5	Nov 29, 2023		US Leachate	S23-De0043838		X		X	X
5	VTP41_3.5	Nov 29, 2023		US Leachate	S23-De0043839			X		X
6	VTP43_1.8	Nov 29, 2023		US Leachate	S23-De0043840	X	X			X
7	VTP38_1.5	Nov 29, 2023		US Leachate	S23-De0043841		X			X
8	VTP30_2.5	Nov 29, 2023		US Leachate	S23-De0043842		X			X
9	VTP35_2.0	Nov 29, 2023		US Leachate	S23-De0043843	X				X
10	VTP44_2.5	Nov 29, 2023		US Leachate	S23-De0043844	X				X
11	VTP48_0.8	Nov 29, 2023		US Leachate	S23-De0043845	X				X
12	VTP43_1.4	Nov 29, 2023		US Leachate	S23-De0043846	X				X
Test Counts						5	5	4	1	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
Heavy Metals							
Lead	mg/L	< 0.01			0.01	Pass	
Mercury	mg/L	< 0.001			0.001	Pass	
Nickel	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Heavy Metals							
Lead	%	89			80-120	Pass	
Mercury	%	108			80-120	Pass	
Nickel	%	83			80-120	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	%	112			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Benzo(a)pyrene	S23-De0044022	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S23-De0043842	CP	%	111			75-125	Pass	
Nickel	S23-De0043842	CP	%	101			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	S23-De0040595	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-De0040594	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel	S23-De0040595	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benzo(a)pyrene	S23-De0044024	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

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

Qualifier Codes/Comments

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised by:

Adam Bateup	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic



Glenn Jackson
Managing Director

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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FW: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

Adam Bateup <AdamBateup@eurofins.com>
Mon 2024-01-22 12:38 PM
To:#AU25_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>

1 attachments (209 KB)
RE: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142);

INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

Standard TAT additional for VOCs on samples No0071354 and No0071357 please – samples are still with us (from late Nov)

Kind Regards,

Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: adambateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487
Website: www.eurofins.com.au/environmental-testing

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From: Matt Beasley <Matt.Beasley@senversa.com.au>
Sent: Monday, 22 January 2024 12:35 PM
To: Adam Bateup <AdamBateup@eurofins.com>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: RE: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

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Just standard is fine thank you Adam

senversa

Matt Beasley
Senior Associate Environmental Scientist
M: +61 421 430 097
www.senversa.com.au
144 Parry Street,
Awabakal Country,
Newcastle West, NSW, 2302, Australia

From: Adam Bateup <AdamBateup@eurofins.com>
Sent: Monday, January 22, 2024 12:34 PM
To: Matt Beasley <Matt.Beasley@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: RE: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

No problem, what TAT would you like this completed on?

Kind Regards,

Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: adambateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487
Website: www.eurofins.com.au/environmental-testing

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From: Matt Beasley <Matt.Beasley@senversa.com.au>
Sent: Monday, 22 January 2024 12:26 PM
To: Adam Bateup <AdamBateup@eurofins.com>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: RE: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

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Hi Adam,

We are happy to proceed with the analysis in any case please.

Kind Regards

Matt Beasley
Senior Associate Environmental Scientist
M: +61 421 430 097
www.senversa.com.au
144 Parry Street,
Awabakal Country,
Newcastle West, NSW, 2302, Australia

From: Adam Bateup <AdamBateup@eurofins.com>
Sent: Monday, January 22, 2024 12:24 PM
To: Matthew Linz <Matthew.Linz@senversa.com.au>

Cc: Matt Beasley <Matt.Beasley@senversa.com.au>
Subject: RE: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

These'll also be out of holding time unfortunately (14 days)

Kind Regards,

Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: adambateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487
Website: www.eurofins.com.au/environmental-testing

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From: Matthew Linz <Matthew.Linz@senversa.com.au>
Sent: Monday, 22 January 2024 12:22 PM
To: Adam Bateup <AdamBateup@eurofins.com>
Cc: Matt Beasley <Matt.Beasley@senversa.com.au>
Subject: FW: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

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Hey Adam

And any chance we can do VOC's on VTP49-0.6 and VTP50-0.2

Regards matt

senversa

Matthew Linz
Senior Environmental Scientist
M: +61 435 895 069
www.senversa.com.au
Level 24, 1 Market St,Djubuguli, Eora Country
Sydney, NSW, 2000, Australia

From: HannahMawbey@eurofins.com <HannahMawbey@eurofins.com>
Sent: Wednesday, December 6, 2023 5:16 PM
To: Matt Beasley <Matt.Beasley@senversa.com.au>
Cc: supplieraccounts <supplieraccounts@senversa.com.au>; Bec Chapple <bec.chapple@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: Eurofins Test Results, Invoice - Report 1048855 : Site LAWRENCE DRYCLEANERS STAGE 2 TP'S (S19142)

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 TP'S
Project ID:	ADDITIONAL: S19142
Turnaround time:	5 Day
Date/Time received	Jan 22, 2024 12:22 PM
Eurofins reference	1061580

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.
✗	Split sample sent to requested external lab.
✗	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:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Perth
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NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1061580
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 22, 2024 12:22 PM
Due: Jan 29, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 TP'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	VTP50-0.2	Nov 24, 2023		Soil	S24-Ja0032276	X	X
2	VTP49-0.6	Nov 24, 2023		Soil	S24-Ja0032277	X	X
Test Counts						2	2

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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Attention: **Matt Beasley**

Report **1061580-S**
Project name ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 TP'S
Project ID ADDITIONAL: S19142
Received Date Jan 22, 2024

Client Sample ID			**VTP50-0.2**	**VTP49-0.6**
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S24-Ja0032276**	**S24-Ja0032277**
Date Sampled			**Nov 24, 2023**	**Nov 24, 2023**
Test/Reference	LOR	Unit		
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			VTP50-0.2	VTP49-0.6
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-Ja0032276	S24-Ja0032277
Date Sampled			Nov 24, 2023	Nov 24, 2023
Test/Reference	LOR	Unit		
Volatile Organics				
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	124	114
Toluene-d8 (surr.)	1	%	103	95
Sample Properties				
% Moisture	1	%	9.9	20

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
Volatile Organics	Sydney	Jan 24, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
% Moisture	Sydney	Jan 23, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1061580
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 22, 2024 12:22 PM
Due: Jan 29, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 TP'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	VTP50-0.2	Nov 24, 2023		Soil	S24-Ja0032276	X	X
2	VTP49-0.6	Nov 24, 2023		Soil	S24-Ja0032277	X	X
Test Counts						2	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
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	
Benzene	mg/kg	< 0.1			0.1	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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Trichlorofluoromethane			mg/kg	< 0.5			0.5	Pass	
Vinyl chloride			mg/kg	< 0.5			0.5	Pass	
Xylenes - Total*			mg/kg	< 0.3			0.3	Pass	
LCS - % Recovery									
Volatile Organics									
1.1-Dichloroethene			%	88			70-130	Pass	
1.1.1-Trichloroethane			%	80			70-130	Pass	
1.2-Dichlorobenzene			%	111			70-130	Pass	
1.2-Dichloroethane			%	118			70-130	Pass	
Benzene			%	81			70-130	Pass	
Ethylbenzene			%	92			70-130	Pass	
m&p-Xylenes			%	92			70-130	Pass	
o-Xylene			%	89			70-130	Pass	
Toluene			%	96			70-130	Pass	
Trichloroethene			%	94			70-130	Pass	
Xylenes - Total*			%	91			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	R24-Ja0025498	NCP	%	88			70-130	Pass	
Ethylbenzene	R24-Ja0025498	NCP	%	86			70-130	Pass	
m&p-Xylenes	R24-Ja0025498	NCP	%	89			70-130	Pass	
o-Xylene	R24-Ja0025498	NCP	%	85			70-130	Pass	
Toluene	R24-Ja0025498	NCP	%	73			70-130	Pass	
Xylenes - Total*	R24-Ja0025498	NCP	%	88			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	R24-Ja0025490	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Bromoform	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	R24-Ja0025490	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	R24-Ja0025490	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	R24-Ja0025490	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	R24-Ja0025490	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	R24-Ja0025490	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	R24-Ja0025490	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Ja0031798	NCP	%	17	21	17	30%	Pass	

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	N/A
Some samples have been subcontracted	No

Authorised by:

Adam Bateup	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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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STANDARD TAT ADDITIONAL: Eurofins Test Results, Invoice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

Adam Bateup <AdamBateup@eurofins.com>
Mon 2024-01-22 1:29 PM
To:#AU25_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>

1 attachments (259 KB)
Re: Eurofins Test Results, Invoice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142);

INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

Standard TAT additional for the following 3 samples, for B8:

- VTP39-1.0
- VTP29-0.5
- VTP26-0.5

Kind Regards,

Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: adambateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487
Website: www.eurofins.com.au/environmental-testing

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From: Matthew Linz <Matthew.Linz@senversa.com.au>
Sent: Monday, 22 January 2024 1:25 PM
To: Adam Bateup <AdamBateup@eurofins.com>
Cc: Matt Beasley <Matt.Beasley@senversa.com.au>
Subject: Re: Eurofins Test Results, Invoice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Same for these ones please Adam standard TAT aswell

Get Outlook for iOS

senversa

Matthew Linz
Senior Environmental Scientist
M: +61 435 895 069

E: Matthew.Linz@senversa.com.au

www.senversa.com.au

Level 24, 1 Market St,Djubuguli, Eora Country

Sydney, NSW, 2000, Australia

+61 2 8252 0000 | Linkedin

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Senversa acknowledges the traditional custodians of the lands and waters upon which we conduct our work, and pay our respect to the elders, past, present and those to come.

From: Adam Bateup <AdamBateup@eurofins.com>
Sent: Monday, January 22, 2024 12:20:29 PM
To: Matthew Linz <Matthew.Linz@senversa.com.au>
Cc: Matt Beasley <Matt.Beasley@senversa.com.au>
Subject: RE: Eurofins Test Results, Invoice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

Hey Matthew,

All analytes but the metals will be out of holding time for these.

Kind Regards,

Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: adambateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487
Website: www.eurofins.com.au/environmental-testing

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From: Matthew Linz <Matthew.Linz@senversa.com.au>
Sent: Monday, 22 January 2024 12:16 PM
To: Adam Bateup <AdamBateup@eurofins.com>
Cc: Matt Beasley <Matt.Beasley@senversa.com.au>
Subject: FW: Eurofins Test Results, Invoice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

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HI Adam

Is it possible to still do Suit B8 analysis on the following;

- VTP39-1.0
- VTP29-0.5
- VTP26-0.5
-

Regards Matthew

Matthew Linz
Senior Environmental Scientist

M: +61 435 895 069
www.senversa.com.au

Level 24, 1 Market St,Djubuguli, Eora Country
Sydney, NSW, 2000, Australia

From: UrsulaLong@eurofins.com <UrsulaLong@eurofins.com>
Sent: Friday, December 15, 2023 8:08 AM
To: Matt Beasley <Matt.Beasley@senversa.com.au>
Cc: senversa.labreports@esdat.com.au; Bec Chapple <bec.chapple@senversa.com.au>; Christopher Redford <Christopher.Redford@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: Eurofins Test Results, Invoice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

Please find attached results and invoice for your project in the subject header.

Regards

Ursula Long

Eurofins
179 Magowar Road
Girraween NSW 2145
AUSTRALIA
Phone: +61 428 845 495
Email: UrsulaLong@eurofins.com
Website:[http://]environment.eurofins.com.au
View our latest EnviroNotes



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www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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46-48 Banksia Road
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+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	ADDITIONAL: WATERLOO REMEDIATION - STAGE 1
Project ID:	ADDITIONAL: S19142
Turnaround time:	5 Day
Date/Time received	Jan 22, 2024 12:16 PM
Eurofins reference	1062006

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:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
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Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1062006
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 22, 2024 12:16 PM
Due: Jan 30, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: WATERLOO REMEDIATION - STAGE 1
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Moisture Set	Eurofins Suite B8
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	VTP39-1.0	Nov 29, 2023		Soil	S24-Ja0035583	X	X
2	VTP29-0.5	Nov 29, 2023		Soil	S24-Ja0035584	X	X
3	VTP26-0.5	Nov 29, 2023		Soil	S24-Ja0035585	X	X
Test Counts						3	3

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1062006-S**
Project name ADDITIONAL: WATERLOO REMEDIATION - STAGE 1
Project ID ADDITIONAL: S19142
Received Date Jan 22, 2024

Client Sample ID			**VTP39-1.0**	**VTP29-0.5**	**VTP26-0.5**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-Ja0035583**	**S24-Ja0035584**	**S24-Ja0035585**
Date Sampled			**Nov 29, 2023**	**Nov 29, 2023**	**Nov 29, 2023**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	570	< 50	110
TRH C29-C36	50	mg/kg	130	< 50	110
TRH C10-C36 (Total)	50	mg/kg	700	< 50	220
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	660	< 100	200
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	660	< 100	200
Volatile Organics					
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1

Client Sample ID			VTP39-1.0	VTP29-0.5	VTP26-0.5
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S24-Ja0035583	S24-Ja0035584	S24-Ja0035585
Date Sampled			Nov 29, 2023	Nov 29, 2023	Nov 29, 2023
Test/Reference	LOR	Unit			
Volatile Organics					
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	2.1	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	2.1	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	2.1	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	101	91	96
Toluene-d8 (surr.)	1	%	85	97	104
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.9	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	2.1	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.4	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	1.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	1.4	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	0.8	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	1.4	< 0.5	< 0.5

Client Sample ID			VTP39-1.0	VTP29-0.5	VTP26-0.5
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S24-Ja0035583	S24-Ja0035584	S24-Ja0035585
Date Sampled			Nov 29, 2023	Nov 29, 2023	Nov 29, 2023
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(k)fluoranthene	0.5	mg/kg	1.2	< 0.5	< 0.5
Chrysene	0.5	mg/kg	1.4	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	2.6	< 0.5	0.8
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	1.1	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	0.9	< 0.5	< 0.5
Pyrene	0.5	mg/kg	2.8	< 0.5	0.8
Total PAH*	0.5	mg/kg	15	< 0.5	1.6
2-Fluorobiphenyl (surr.)	1	%	74	96	74
p-Terphenyl-d14 (surr.)	1	%	84	76	72
Heavy Metals					
Arsenic	2	mg/kg	3.7	< 2	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.5	< 5	25
Copper	5	mg/kg	16	10	110
Lead	5	mg/kg	130	32	1100
Mercury	0.1	mg/kg	4.9	0.2	0.4
Nickel	5	mg/kg	< 5	< 5	16
Zinc	5	mg/kg	70	27	180
Sample Properties					
% Moisture	1	%	15	19	13

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	Sydney	Jan 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Jan 29, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 29, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jan 29, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Jan 24, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1062006
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 22, 2024 12:16 PM
Due: Jan 30, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: WATERLOO REMEDIATION - STAGE 1
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Moisture Set	Eurofins Suite B8
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	VTP39-1.0	Nov 29, 2023		Soil	S24-Ja0035583	X	X
2	VTP29-0.5	Nov 29, 2023		Soil	S24-Ja0035584	X	X
3	VTP26-0.5	Nov 29, 2023		Soil	S24-Ja0035585	X	X
Test Counts						3	3

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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	
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							
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	
Benzene	mg/kg	< 0.1			0.1	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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	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	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C10-C14	%	87			70-130	Pass	
TRH >C10-C16	%	88			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	119			70-130	Pass	
1.1.1-Trichloroethane	%	89			70-130	Pass	
1.2-Dichlorobenzene	%	122			70-130	Pass	
1.2-Dichloroethane	%	128			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	%	100			70-130	Pass	
Ethylbenzene	%	107			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
o-Xylene	%	109			70-130	Pass	
Toluene	%	113			70-130	Pass	
Trichloroethene	%	80			70-130	Pass	
Xylenes - Total*	%	109			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	120			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	98			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	100			70-130	Pass	
Benz(a)anthracene	%	96			70-130	Pass	
Benzo(a)pyrene	%	98			70-130	Pass	
Benzo(b&j)fluoranthene	%	93			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	102			70-130	Pass	
Chrysene	%	96			70-130	Pass	
Dibenz(a.h)anthracene	%	108			70-130	Pass	
Fluoranthene	%	98			70-130	Pass	
Fluorene	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	98			70-130	Pass	
Naphthalene	%	99			70-130	Pass	
Phenanthrene	%	91			70-130	Pass	
Pyrene	%	100			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	108			80-120	Pass	
Copper	%	117			80-120	Pass	
Lead	%	108			80-120	Pass	
Mercury	%	105			80-120	Pass	
Nickel	%	108			80-120	Pass	
Zinc	%	105			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	S24-Ja0042169	NCP	%	82			70-130	Pass	
Ethylbenzene	S24-Ja0042169	NCP	%	94			70-130	Pass	
m&p-Xylenes	S24-Ja0042169	NCP	%	102			70-130	Pass	
o-Xylene	S24-Ja0042169	NCP	%	98			70-130	Pass	
Toluene	S24-Ja0042169	NCP	%	96			70-130	Pass	
Xylenes - Total*	S24-Ja0042169	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Ja0042169	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	N24-Ja0033439	NCP	%	75			70-130	Pass	
Acenaphthylene	S24-Ja0033620	NCP	%	87			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Anthracene	N24-Ja0033439	NCP	%	79			70-130	Pass	
Benz(a)anthracene	N24-Ja0033439	NCP	%	73			70-130	Pass	
Benzo(a)pyrene	S24-Ja0033620	NCP	%	84			70-130	Pass	
Benzo(b&j)fluoranthene	S24-Ja0033620	NCP	%	85			70-130	Pass	
Benzo(g.h.i)perylene	N24-Ja0033439	NCP	%	105			70-130	Pass	
Benzo(k)fluoranthene	N24-Ja0033439	NCP	%	73			70-130	Pass	
Chrysene	N24-Ja0033439	NCP	%	81			70-130	Pass	
Dibenz(a.h)anthracene	N24-Ja0033439	NCP	%	71			70-130	Pass	
Fluoranthene	N24-Ja0033439	NCP	%	99			70-130	Pass	
Fluorene	N24-Ja0033439	NCP	%	71			70-130	Pass	
Indeno(1.2.3-cd)pyrene	N24-Ja0033439	NCP	%	85			70-130	Pass	
Naphthalene	N24-Ja0033439	NCP	%	76			70-130	Pass	
Phenanthrene	S24-Ja0033620	NCP	%	88			70-130	Pass	
Pyrene	N24-Ja0033439	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Ja0036236	NCP	%	99			75-125	Pass	
Cadmium	S24-Ja0036236	NCP	%	95			75-125	Pass	
Chromium	S24-Ja0036236	NCP	%	106			75-125	Pass	
Copper	S24-Ja0036236	NCP	%	111			75-125	Pass	
Lead	S24-Ja0036236	NCP	%	101			75-125	Pass	
Mercury	S24-Ja0036236	NCP	%	97			75-125	Pass	
Nickel	S24-Ja0036236	NCP	%	96			75-125	Pass	
Zinc	S24-Ja0036236	NCP	%	117			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Ja0039721	NCP	%	82			70-130	Pass	
TRH >C10-C16	S24-Ja0039721	NCP	%	85			70-130	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	S24-Ja0033940	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S24-Ja0044562	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Ja0044562	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Ja0044562	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S24-Ja0033940	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S24-Ja0044562	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Ja0044562	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-Ja0044562	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.3-Dichloropropane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S24-Ja0033940	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S24-Ja0033940	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S24-Ja0033940	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S24-Ja0033940	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S24-Ja0033940	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	S24-Ja0033940	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Ja0033940	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N24-Ja0033437	NCP	mg/kg	0.6	< 0.5	110	30%	Fail	Q15
Benzo(a)pyrene	N24-Ja0033437	NCP	mg/kg	0.5	< 0.5	120	30%	Fail	Q15
Benzo(b&j)fluoranthene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N24-Ja0033437	NCP	mg/kg	0.5	< 0.5	110	30%	Fail	Q15
Benzo(k)fluoranthene	N24-Ja0033437	NCP	mg/kg	0.6	< 0.5	70	30%	Fail	Q15
Chrysene	N24-Ja0033437	NCP	mg/kg	0.9	< 0.5	120	30%	Fail	Q15

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Dibenz(a.h)anthracene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N24-Ja0033437	NCP	mg/kg	2.6	0.6	120	30%	Fail	Q15
Fluorene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N24-Ja0033437	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N24-Ja0033437	NCP	mg/kg	0.8	< 0.5	110	30%	Fail	Q15
Pyrene	N24-Ja0033437	NCP	mg/kg	2.0	< 0.5	130	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Copper	N24-Ja0033434	NCP	mg/kg	8.3	9.2	10	30%	Pass	
Lead	N24-Ja0033434	NCP	mg/kg	9.8	10	2.0	30%	Pass	
Zinc	N24-Ja0033434	NCP	mg/kg	23	28	19	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N24-Ja0036106	NCP	%	1.6	2.2	32	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Ja0035585	CP	mg/kg	5.0	5.2	2.9	30%	Pass	
Cadmium	S24-Ja0035585	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Ja0035585	CP	mg/kg	25	13	62	30%	Fail	Q15
Mercury	S24-Ja0035585	CP	mg/kg	0.4	0.2	66	30%	Fail	Q15
Nickel	S24-Ja0035585	CP	mg/kg	16	9.9	45	30%	Fail	Q15

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

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
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.

Authorised by:

Ursula Long	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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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www.senversa.com.au
ABN 89 132 231 380

Chain of Custody Documentation

Laboratory:	mgt/Eurofins NSW		
Address:			
Contact:	Sample Receipt		
Phone:			

Job Number:	S19142	**Purchase Order:**	PO021581
Project Name:	Lawrence drycleaners stage 2 SB's	**Quote No:**	230515Senn-1
Sampled By:	Matt Linz	**Turn Around Time:**	3 day TAT
Project Manager:	MB	**Page:**	1 of 1
Email Report To:	Matt.Beasley@senversa.com.au Matthew.linz@senversa.com Bec.chapple@senversa.com.au	**Phone/Mobile:**	435895069

Sample Information				Container Information		Analysis Required													
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles	HALVOL	Suit B8	TCLP B(a)P	TCLP Lead	Asbestos NEPM	VOC	Btexn	ASLP DI Zero Headspace VOC	Phenols/OCP/OPP	TOC	HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	SB24_0.2	Soil	2/1/2024	-	Jar +Bag	2		x										
	SB24_0.5	Soil	2/1/2024	-	Jar +Bag	2		x			x				x			
	SB24_1.0	Soil	2/1/2024	-	Jar +Bag	2		x			x							
	SB24_2.0	Soil	2/1/2024	-	Jar	1		x										
	SB24_3.0	Soil	2/1/2024	-	Jar	1		x										
	SB24_4.0	Soil	2/1/2024	-	Jar	1		x								x		
	SB24_5.0	Soil	2/1/2024	-	Jar	1		x						x		x		
	SB24_6.0	Soil	2/1/2024	-	Jar	1		x						x		x		
	SB24_7.0	Soil	2/1/2024	-	Jar	1		x						x				
	SB24_7.2	Soil	2/1/2024	-	Jar	1						x		x				
	SB24_7.3	Soil	2/1/2024	-	Jar	1						x		x				
	SB24_7.4	Soil	2/1/2024	-	Jar	1						x		x				
	SB24_7.5	Soil	2/1/2024	-	Jar	1						x		x				
	SB25_0.2	Soil	2/1/2024	-	Jar +Bag	2		x										
	SB25_0.5	Soil	2/1/2024	-	Jar +Bag	2		x			x				x			
	SB25_1.0	Soil	2/1/2024	-	Jar +Bag	2		x										
	SB25_2.0	Soil	2/1/2024	-	Jar +Bag	2		x			x							
	SB25_3.0	Soil	2/1/2024	-	Jar	1		x										
	SB25_4.0	Soil	2/1/2024	-	Jar	1		x								x		
	SB25_5.0	Soil	2/1/2024	-	Jar	1		x						x		x		
	SB25_6.0	Soil	2/1/2024	-	Jar	1		x						x		x		
	SB25_6.8	Soil	2/1/2024	-	Jar	1						x		x				
	SB25_6.9	Soil	2/1/2024	-	Jar	1						x		x				
	SB25_7.0	Soil	2/1/2024	-	Jar	1						x		x				
	SB25_7.0	Soil	2/1/2024	-	Jar	1						x		x				
	QC134	Soil	2/1/2024	-	Jar	1		x										
	QC135	Soil	2/1/2024	-	Jar	1		x										
	QC338	Soil	2/1/2024	-	vial	1						x						TB
	QC438	Soil	2/1/2024	-	vial	1							x					TS
Total						1												

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples;

Sampler Name: Matthew Linz **Signature:** **Date:** 2/1/2024

Relinquished By: Matthew Linz		**Method of Shipment (if applicable):**	**Received by:**		
Name/Signature:	2/1/2024	Carrier / Reference #:	Name/Signature: Elizabeth Brotherton	Date:	4/2
Of:	Time: 7:58	Date/Time:	Of: EB	Time:	9:13AM
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:	
Of:	Time:	Date/Time:	Of:	Time:	
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:	
Of:	Time:	Date/Time:	Of:	Time:	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's Iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

10.1°C

1065190

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Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID:	S19142
Turnaround time:	3 Day
Date/Time received	Feb 2, 2024 9:13 PM
Eurofins reference	1065190

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

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

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email: EnviroSales@eurofins.com

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1065190
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 7, 2024
Priority: 3 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	AUS Leaching Procedure	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X									
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X	X
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	SB24_0.2	Feb 02, 2024		Soil	S24-Fe0007866									X	X	
2	SB24_0.5	Feb 02, 2024		Soil	S24-Fe0007867	X			X		X			X	X	
3	SB24_1.0	Feb 02, 2024		Soil	S24-Fe0007868	X								X	X	
4	SB24_2.0	Feb 02, 2024		Soil	S24-Fe0007869									X	X	
5	SB24_3.0	Feb 02, 2024		Soil	S24-Fe0007870		X							X	X	
6	SB24_4.0	Feb 02, 2024		Soil	S24-Fe0007871		X							X	X	
7	SB24_5.0	Feb 02, 2024		Soil	S24-Fe0007872		X							X	X	
8	SB24_6.0	Feb 02, 2024		Soil	S24-Fe0007873									X	X	
9	SB24_7.0	Feb 02, 2024		Soil	S24-Fe0007874									X	X	
10	SB24_7.2	Feb 02, 2024		Soil	S24-Fe0007875								X	X		
11	SB24_7.3	Feb 02, 2024		Soil	S24-Fe0007876								X	X		
12	SB24_7.4	Feb 02, 2024		Soil	S24-Fe0007877								X	X		

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
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Order No.:
Report #: 1065190
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 7, 2024
Priority: 3 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	AUS Leaching Procedure	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X									
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X	X
13	SB24_7.5	Feb 02, 2024		Soil	S24-Fe0007878								X	X		
14	SB25_0.2	Feb 02, 2024		Soil	S24-Fe0007879									X	X	
15	SB25_0.5	Feb 02, 2024		Soil	S24-Fe0007880	X	X				X			X	X	
16	SB25_1.0	Feb 02, 2024		Soil	S24-Fe0007881									X	X	
17	SB25_2.0	Feb 02, 2024		Soil	S24-Fe0007882	X								X	X	
18	SB25_3.0	Feb 02, 2024		Soil	S24-Fe0007883									X	X	
19	SB25_4.0	Feb 02, 2024		Soil	S24-Fe0007884		X							X	X	
20	SB25_5.0	Feb 02, 2024		Soil	S24-Fe0007885		X							X	X	
21	SB25_6.0	Feb 02, 2024		Soil	S24-Fe0007886		X							X	X	
22	SB25_6.8	Feb 02, 2024		Soil	S24-Fe0007887								X	X		
23	SB25_6.9	Feb 02, 2024		Soil	S24-Fe0007888								X	X		
24	SB25_7.0	Feb 02, 2024		Soil	S24-Fe0007889								X	X		
25	SB25_7.1	Feb 02, 2024		Soil	S24-Fe0007890								X	X		
26	QC134	Feb 02, 2024		Soil	S24-Fe0007891									X	X	
27	QC135	Feb 02, 2024		Soil	S24-Fe0007892									X	X	

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Melbourne Laboratory - NATA # 1261 Site # 1254							X									
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X	X
28	QC338 TB	Feb 02, 2024		Soil	S24-Fe0007893					X						
29	QC438 TS	Feb 02, 2024		Soil	S24-Fe0007894											X
30	TSL	Feb 02, 2024		Soil	S24-Fe0007895											X
31	SB24_4.0	Feb 02, 2024		AUS Leachate	S24-Fe0007896			X				X	X			
32	SB24_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007897			X				X	X			
33	SB24_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007898			X				X	X			
34	SB24_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007899			X				X	X			
35	SB24_7.2	Feb 02, 2024		AUS Leachate	S24-Fe0007900			X				X	X			
36	SB24_7.3	Feb 02, 2024		AUS Leachate	S24-Fe0007901			X				X	X			
37	SB24_7.4	Feb 02, 2024		AUS Leachate	S24-Fe0007902			X				X	X			
38	SB24_7.5	Feb 02, 2024		AUS Leachate	S24-Fe0007903			X				X	X			
39	SB25_0.5	Feb 02, 2024		AUS Leachate	S24-Fe0007904			X				X	X			
40	SB25_1.0	Feb 02, 2024		AUS Leachate	S24-Fe0007905			X				X	X			
41	SB25_2.0	Feb 02, 2024		AUS Leachate	S24-Fe0007906			X				X	X			
42	SB25_3.0	Feb 02, 2024		AUS Leachate	S24-Fe0007907			X				X	X			

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Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	AUS Leaching Procedure	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X									
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X	X
43	SB25_4.0	Feb 02, 2024		AUS Leachate	S24-Fe0007908			X				X	X			
44	SB25_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007909			X				X	X			
45	SB25_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007910			X				X	X			
46	SB25_6.8	Feb 02, 2024		AUS Leachate	S24-Fe0007911			X				X	X			
47	SB25_6.9	Feb 02, 2024		AUS Leachate	S24-Fe0007912			X				X	X			
48	SB25_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007913			X				X	X			
49	SB25_7.1	Feb 02, 2024		AUS Leachate	S24-Fe0007914			X				X	X			
Test Counts						4	7	19	1	1	2	19	27	27	19	2

Certificate of Analysis

Senversa Pty Ltd NSW
Level 24, 1 Market Street
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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
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.

Attention:	Matt Beasley
Report	1065190-AID
Project Name	LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID	S19142
Received Date	Feb 02, 2024
Date Reported	Feb 21, 2024

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 LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID S19142
Date Sampled Feb 02, 2024
Report 1065190-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SB24_0.5	24-Fe0007867	Feb 02, 2024	Approximate Sample 737g Sample consisted of: Brown coarse-grained sandy soil, cement, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB24_1.0	24-Fe0007868	Feb 02, 2024	Approximate Sample 588g Sample consisted of: Brown coarse-grained sandy soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB25_0.5	24-Fe0007880	Feb 02, 2024	Approximate Sample 624g Sample consisted of: Brown coarse-grained sandy soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB25_2.0	24-Fe0007882	Feb 02, 2024	Approximate Sample 579g Sample consisted of: Brown coarse-grained sandy soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% 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	Feb 05, 2024	Indefinite

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	SB24_0.2	Feb 02, 2024		Soil	S24-Fe0007866								X	X	
2	SB24_0.5	Feb 02, 2024		Soil	S24-Fe0007867	X		X		X			X	X	
3	SB24_1.0	Feb 02, 2024		Soil	S24-Fe0007868	X							X	X	
4	SB24_2.0	Feb 02, 2024		Soil	S24-Fe0007869								X	X	
5	SB24_3.0	Feb 02, 2024		Soil	S24-Fe0007870		X						X	X	
6	SB24_4.0	Feb 02, 2024		Soil	S24-Fe0007871		X						X	X	
7	SB24_5.0	Feb 02, 2024		Soil	S24-Fe0007872		X						X	X	
8	SB24_6.0	Feb 02, 2024		Soil	S24-Fe0007873								X	X	
9	SB24_7.0	Feb 02, 2024		Soil	S24-Fe0007874								X	X	
10	SB24_7.2	Feb 02, 2024		Soil	S24-Fe0007875							X	X		
11	SB24_7.3	Feb 02, 2024		Soil	S24-Fe0007876							X	X		
12	SB24_7.4	Feb 02, 2024		Soil	S24-Fe0007877							X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
13	SB24_7.5	Feb 02, 2024		Soil	S24-Fe0007878							X	X		
14	SB25_0.2	Feb 02, 2024		Soil	S24-Fe0007879								X	X	
15	SB25_0.5	Feb 02, 2024		Soil	S24-Fe0007880	X	X			X			X	X	
16	SB25_1.0	Feb 02, 2024		Soil	S24-Fe0007881								X	X	
17	SB25_2.0	Feb 02, 2024		Soil	S24-Fe0007882	X							X	X	
18	SB25_3.0	Feb 02, 2024		Soil	S24-Fe0007883								X	X	
19	SB25_4.0	Feb 02, 2024		Soil	S24-Fe0007884		X						X	X	
20	SB25_5.0	Feb 02, 2024		Soil	S24-Fe0007885		X						X	X	
21	SB25_6.0	Feb 02, 2024		Soil	S24-Fe0007886		X						X	X	
22	SB25_6.8	Feb 02, 2024		Soil	S24-Fe0007887							X	X		
23	SB25_6.9	Feb 02, 2024		Soil	S24-Fe0007888							X	X		
24	SB25_7.0	Feb 02, 2024		Soil	S24-Fe0007889							X	X		
25	SB25_7.1	Feb 02, 2024		Soil	S24-Fe0007890							X	X		
26	QC134	Feb 02, 2024		Soil	S24-Fe0007891								X	X	
27	QC135	Feb 02, 2024		Soil	S24-Fe0007892								X	X	

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Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
28	QC338 TB	Feb 02, 2024		Soil	S24-Fe0007893				X						
29	QC438 TS	Feb 02, 2024		Soil	S24-Fe0007894										X
30	SB24_4.0	Feb 02, 2024		AUS Leachate	S24-Fe0007896						X	X			
31	SB24_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007897						X	X			
32	SB24_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007898						X	X			
33	SB24_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007899						X	X			
34	SB24_7.2	Feb 02, 2024		AUS Leachate	S24-Fe0007900						X	X			
35	SB24_7.3	Feb 02, 2024		AUS Leachate	S24-Fe0007901						X	X			
36	SB24_7.4	Feb 02, 2024		AUS Leachate	S24-Fe0007902						X	X			
37	SB24_7.5	Feb 02, 2024		AUS Leachate	S24-Fe0007903						X	X			
38	SB25_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007909						X	X			
39	SB25_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007910						X	X			
40	SB25_6.8	Feb 02, 2024		AUS Leachate	S24-Fe0007911						X	X			
41	SB25_6.9	Feb 02, 2024		AUS Leachate	S24-Fe0007912						X	X			
42	SB25_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007913						X	X			

eurofins

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

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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46-48 Banksia Road
Welshpool
WA 6106
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NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.: PO021581
Report #: 1065190
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 7, 2024
Priority: 3 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail	Asbestos - WA guidelines	Total Organic Carbon	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254		X								
Sydney Laboratory - NATA # 1261 Site # 18217	X		X	X	X	X	X	X	X	X
43 SB25_7.1 Feb 02, 2024 AUS Leachate S24-Fe0007914						X	X			
Test Counts	4	7	1	1	2	14	22	27	19	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. 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**). This estimate is not NATA-accredited.
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.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
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:

Chamath JHM Annakkage	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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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Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1065190-L**
Project name LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID S19142
Received Date Feb 02, 2024

Client Sample ID			**SB24_4.0**	**SB24_5.0**	**SB24_6.0**	**SB24_7.0**
Sample Matrix			**AUS Leachate**	**AUS Leachate**	**AUS Leachate**	**AUS Leachate**
Eurofins Sample No.			**S24-Fe0007896**	**S24-Fe0007897**	**S24-Fe0007898**	**S24-Fe0007899**
Date Sampled			**Feb 02, 2024**	**Feb 02, 2024**	**Feb 02, 2024**	**Feb 02, 2024**
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1.1-Dichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.1-Trichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.1.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.2-Trichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.2.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dibromoethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2.3-Trichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.3-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.3-Dichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.4-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromodichloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromoform	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Carbon Tetrachloride	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chloroform	0.02	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
cis-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
cis-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibromochloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibromomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Iodomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Methylene Chloride	0.02	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Tetrachloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	0.08
trans-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
trans-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Trichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Trichlorofluoromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Vinyl chloride	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Vic EPA IWRG 621 CHC (Total)*	0.02	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Toluene-d8 (surr.)	0.02	%	101	113	88	88

Client Sample ID			SB24_4.0	SB24_5.0	SB24_6.0	SB24_7.0
Sample Matrix			AUS Leachate	AUS Leachate	AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007896	S24-Fe0007897	S24-Fe0007898	S24-Fe0007899
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
AUS Leaching Procedure - ZHE						
Leachate Fluid		comment	4.0	4.0	4.0	4.0
pH (AUS ZHE - off)	0.1	pH Units	6.4	5.6	8.8	8.9
pH (Leachate Fluid)	0.1	pH Units	6.6	6.6	7.1	7.1

Client Sample ID			SB24_7.2	SB24_7.3	SB24_7.4	SB24_7.5
Sample Matrix			AUS Leachate	AUS Leachate	AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007900	S24-Fe0007901	S24-Fe0007902	S24-Fe0007903
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1.1-Dichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.1-Trichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.1.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.2-Trichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.2.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dibromoethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2.3-Trichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.3-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.3-Dichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.4-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromodichloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromoform	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Carbon Tetrachloride	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chloroform	0.02	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
cis-1.2-Dichloroethene	0.02	mg/L	0.04	< 0.02	0.05	< 0.02
cis-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibromochloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibromomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Iodomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Methylene Chloride	0.02	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Tetrachloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
trans-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
trans-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Trichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Trichlorofluoromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Vinyl chloride	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Vic EPA IWRG 621 CHC (Total)*	0.02	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Toluene-d8 (surr.)	0.02	%	104	107	102	104

Client Sample ID			SB24_7.2	SB24_7.3	SB24_7.4	SB24_7.5
Sample Matrix			AUS Leachate	AUS Leachate	AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007900	S24-Fe0007901	S24-Fe0007902	S24-Fe0007903
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
AUS Leaching Procedure - ZHE						
Leachate Fluid		comment	4.0	4.0	4.0	4.0
pH (AUS ZHE - off)	0.1	pH Units	8.5	8.0	7.8	7.5
pH (Leachate Fluid)	0.1	pH Units	7.1	7.1	7.1	7.1

Client Sample ID			SB25_5.0	SB25_6.0	SB25_6.8	SB25_6.9
Sample Matrix			AUS Leachate	AUS Leachate	AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007909	S24-Fe0007910	S24-Fe0007911	S24-Fe0007912
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1.1-Dichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.1-Trichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.1.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.2-Trichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.1.2.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dibromoethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichloroethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2-Dichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.2.3-Trichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.3-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.3-Dichloropropane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
1.4-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromodichloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromoform	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Bromomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Carbon Tetrachloride	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorobenzene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chloroform	0.02	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Chloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
cis-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
cis-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibromochloromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibromomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Iodomethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Methylene Chloride	0.02	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Tetrachloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
trans-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
trans-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Trichloroethene	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Trichlorofluoromethane	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Vinyl chloride	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Vic EPA IWRG 621 CHC (Total)*	0.02	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Toluene-d8 (surr.)	0.02	%	88	95	100	104

Client Sample ID			SB25_5.0	SB25_6.0	SB25_6.8	SB25_6.9
Sample Matrix			AUS Leachate	AUS Leachate	AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007909	S24-Fe0007910	S24-Fe0007911	S24-Fe0007912
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
AUS Leaching Procedure - ZHE						
Leachate Fluid		comment	4.0	4.0	4.0	4.0
pH (AUS ZHE - off)	0.1	pH Units	9.1	8.7	10.0	9.0
pH (Leachate Fluid)	0.1	pH Units	7.1	7.1	7.1	7.1

Client Sample ID			SB25_7.0	SB25_7.1
Sample Matrix			AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007913	S24-Fe0007914
Date Sampled			Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit		
Halogenated Volatile Organics				
1.1-Dichloroethane	0.02	mg/L	< 0.02	< 0.02
1.1-Dichloroethene	0.02	mg/L	< 0.02	< 0.02
1.1.1-Trichloroethane	0.02	mg/L	< 0.02	< 0.02
1.1.1.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02
1.1.2-Trichloroethane	0.02	mg/L	< 0.02	< 0.02
1.1.2.2-Tetrachloroethane	0.02	mg/L	< 0.02	< 0.02
1.2-Dibromoethane	0.02	mg/L	< 0.02	< 0.02
1.2-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02
1.2-Dichloroethane	0.02	mg/L	< 0.02	< 0.02
1.2-Dichloropropane	0.02	mg/L	< 0.02	< 0.02
1.2.3-Trichloropropane	0.02	mg/L	< 0.02	< 0.02
1.3-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02
1.3-Dichloropropane	0.02	mg/L	< 0.02	< 0.02
1.4-Dichlorobenzene	0.02	mg/L	< 0.02	< 0.02
Bromodichloromethane	0.02	mg/L	< 0.02	< 0.02
Bromoform	0.02	mg/L	< 0.02	< 0.02
Bromomethane	0.02	mg/L	< 0.02	< 0.02
Carbon Tetrachloride	0.02	mg/L	< 0.02	< 0.02
Chlorobenzene	0.02	mg/L	< 0.02	< 0.02
Chloroform	0.02	mg/L	< 0.05	< 0.05
Chloromethane	0.02	mg/L	< 0.02	< 0.02
cis-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02
cis-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02
Dibromochloromethane	0.02	mg/L	< 0.02	< 0.02
Dibromomethane	0.02	mg/L	< 0.02	< 0.02
Iodomethane	0.02	mg/L	< 0.02	< 0.02
Methylene Chloride	0.02	mg/L	< 0.1	< 0.1
Tetrachloroethene	0.02	mg/L	< 0.02	< 0.02
trans-1.2-Dichloroethene	0.02	mg/L	< 0.02	< 0.02
trans-1.3-Dichloropropene	0.02	mg/L	< 0.02	< 0.02
Trichloroethene	0.02	mg/L	< 0.02	< 0.02
Trichlorofluoromethane	0.02	mg/L	< 0.02	< 0.02
Vinyl chloride	0.02	mg/L	< 0.02	< 0.02
Vic EPA IWRG 621 CHC (Total)*	0.02	mg/L	< 0.1	< 0.1
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.1	< 0.1
Toluene-d8 (surr.)	0.02	%	103	104

Client Sample ID			SB25_7.0	SB25_7.1
Sample Matrix			AUS Leachate	AUS Leachate
Eurofins Sample No.			S24-Fe0007913	S24-Fe0007914
Date Sampled			Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit		
AUS Leaching Procedure - ZHE				
Leachate Fluid		comment	4.0	4.0
pH (AUS ZHE - off)	0.1	pH Units	8.6	8.4
pH (Leachate Fluid)	0.1	pH Units	7.1	7.1

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
Halogenated Volatile Organics	Sydney	Feb 19, 2024	7 Days

- Method: LTM-ORG-2150 VOCs by Purge Trap GCMS

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
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NSW 2000

Order No.: PO021581
Report #: 1065190
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 7, 2024
Priority: 3 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	SB24_0.2	Feb 02, 2024		Soil	S24-Fe0007866								X	X	
2	SB24_0.5	Feb 02, 2024		Soil	S24-Fe0007867	X		X		X			X	X	
3	SB24_1.0	Feb 02, 2024		Soil	S24-Fe0007868	X							X	X	
4	SB24_2.0	Feb 02, 2024		Soil	S24-Fe0007869								X	X	
5	SB24_3.0	Feb 02, 2024		Soil	S24-Fe0007870		X						X	X	
6	SB24_4.0	Feb 02, 2024		Soil	S24-Fe0007871		X						X	X	
7	SB24_5.0	Feb 02, 2024		Soil	S24-Fe0007872		X						X	X	
8	SB24_6.0	Feb 02, 2024		Soil	S24-Fe0007873								X	X	
9	SB24_7.0	Feb 02, 2024		Soil	S24-Fe0007874								X	X	
10	SB24_7.2	Feb 02, 2024		Soil	S24-Fe0007875							X	X		
11	SB24_7.3	Feb 02, 2024		Soil	S24-Fe0007876							X	X		
12	SB24_7.4	Feb 02, 2024		Soil	S24-Fe0007877							X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
13	SB24_7.5	Feb 02, 2024		Soil	S24-Fe0007878							X	X		
14	SB25_0.2	Feb 02, 2024		Soil	S24-Fe0007879								X	X	
15	SB25_0.5	Feb 02, 2024		Soil	S24-Fe0007880	X	X			X			X	X	
16	SB25_1.0	Feb 02, 2024		Soil	S24-Fe0007881								X	X	
17	SB25_2.0	Feb 02, 2024		Soil	S24-Fe0007882	X							X	X	
18	SB25_3.0	Feb 02, 2024		Soil	S24-Fe0007883								X	X	
19	SB25_4.0	Feb 02, 2024		Soil	S24-Fe0007884		X						X	X	
20	SB25_5.0	Feb 02, 2024		Soil	S24-Fe0007885		X						X	X	
21	SB25_6.0	Feb 02, 2024		Soil	S24-Fe0007886		X						X	X	
22	SB25_6.8	Feb 02, 2024		Soil	S24-Fe0007887							X	X		
23	SB25_6.9	Feb 02, 2024		Soil	S24-Fe0007888							X	X		
24	SB25_7.0	Feb 02, 2024		Soil	S24-Fe0007889							X	X		
25	SB25_7.1	Feb 02, 2024		Soil	S24-Fe0007890							X	X		
26	QC134	Feb 02, 2024		Soil	S24-Fe0007891								X	X	
27	QC135	Feb 02, 2024		Soil	S24-Fe0007892								X	X	

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Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

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Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
28	QC338 TB	Feb 02, 2024		Soil	S24-Fe0007893				X						
29	QC438 TS	Feb 02, 2024		Soil	S24-Fe0007894										X
30	SB24_4.0	Feb 02, 2024		AUS Leachate	S24-Fe0007896						X	X			
31	SB24_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007897						X	X			
32	SB24_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007898						X	X			
33	SB24_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007899						X	X			
34	SB24_7.2	Feb 02, 2024		AUS Leachate	S24-Fe0007900						X	X			
35	SB24_7.3	Feb 02, 2024		AUS Leachate	S24-Fe0007901						X	X			
36	SB24_7.4	Feb 02, 2024		AUS Leachate	S24-Fe0007902						X	X			
37	SB24_7.5	Feb 02, 2024		AUS Leachate	S24-Fe0007903						X	X			
38	SB25_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007909						X	X			
39	SB25_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007910						X	X			
40	SB25_6.8	Feb 02, 2024		AUS Leachate	S24-Fe0007911						X	X			
41	SB25_6.9	Feb 02, 2024		AUS Leachate	S24-Fe0007912						X	X			
42	SB25_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007913						X	X			

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Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
43	SB25_7.1	Feb 02, 2024		AUS Leachate	S24-Fe0007914						X	X			
Test Counts						4	7	1	1	2	14	22	27	19	1

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
Halogenated Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.02			0.02	Pass	
1.1-Dichloroethene	mg/L	< 0.02			0.02	Pass	
1.1.1-Trichloroethane	mg/L	< 0.02			0.02	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.02			0.02	Pass	
1.1.2-Trichloroethane	mg/L	< 0.02			0.02	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.02			0.02	Pass	
1.2-Dibromoethane	mg/L	< 0.02			0.02	Pass	
1.2-Dichlorobenzene	mg/L	< 0.02			0.02	Pass	
1.2-Dichloroethane	mg/L	< 0.02			0.02	Pass	
1.2-Dichloropropane	mg/L	< 0.02			0.02	Pass	
1.2.3-Trichloropropane	mg/L	< 0.02			0.02	Pass	
1.3-Dichlorobenzene	mg/L	< 0.02			0.02	Pass	
1.3-Dichloropropane	mg/L	< 0.02			0.02	Pass	
1.4-Dichlorobenzene	mg/L	< 0.02			0.02	Pass	
Bromodichloromethane	mg/L	< 0.02			0.02	Pass	
Bromoform	mg/L	< 0.02			0.02	Pass	
Bromomethane	mg/L	< 0.02			0.02	Pass	
Carbon Tetrachloride	mg/L	< 0.02			0.02	Pass	
Chlorobenzene	mg/L	< 0.02			0.02	Pass	
Chloroform	mg/L	< 0.02			0.02	Pass	
Chloromethane	mg/L	< 0.02			0.02	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.02			0.02	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.02			0.02	Pass	
Dibromochloromethane	mg/L	< 0.02			0.02	Pass	
Dibromomethane	mg/L	< 0.02			0.02	Pass	
Iodomethane	mg/L	< 0.02			0.02	Pass	
Methylene Chloride	mg/L	< 0.02			0.02	Pass	
Tetrachloroethene	mg/L	< 0.02			0.02	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.02			0.02	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.02			0.02	Pass	
Trichloroethene	mg/L	< 0.02			0.02	Pass	
Trichlorofluoromethane	mg/L	< 0.02			0.02	Pass	
Vinyl chloride	mg/L	< 0.02			0.02	Pass	

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

Authorised by:

Adam Bateup	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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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SYDNEY
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Attention: **Matt Beasley**

Report **1065190-S**
Project name LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID S19142
Received Date Feb 02, 2024

Client Sample ID			**SB24_0.2**	**SB24_0.5**	**SB24_1.0**	**SB24_2.0**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-Fe0007866**	**S24-Fe0007867**	**S24-Fe0007868**	**S24-Fe0007869**
Date Sampled			**Feb 02, 2024**	**Feb 02, 2024**	**Feb 02, 2024**	**Feb 02, 2024**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	81	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	81	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	100	< 100	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SB24_0.2	SB24_0.5	SB24_1.0	SB24_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007866	S24-Fe0007867	S24-Fe0007868	S24-Fe0007869
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	0.4	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	0.5	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	67	92	102	87
Toluene-d8 (surr.)	1	%	67	89	99	82
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB24_0.2	SB24_0.5	SB24_1.0	SB24_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007866	S24-Fe0007867	S24-Fe0007868	S24-Fe0007869
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	52	77	81	87
p-Terphenyl-d14 (surr.)	1	%	62	76	100	100
Heavy Metals						
Arsenic	2	mg/kg	7.7	2.7	2.8	< 2
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	9.5	7.1	10	< 5
Copper	5	mg/kg	54	17	25	< 5
Lead	5	mg/kg	340	47	23	< 5
Mercury	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.8	11	8.7	< 5
Zinc	5	mg/kg	110	110	38	26
Sample Properties						
% Moisture	1	%	13	12	8.3	5.0
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	-	-
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	-	-

Client Sample ID			SB24_0.2	SB24_0.5	SB24_1.0	SB24_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007866	S24-Fe0007867	S24-Fe0007868	S24-Fe0007869
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dibutylchlorendate (surr.)	1	%	-	92	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	76	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	87	-	-
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	-	-

Client Sample ID			SB24_0.2	SB24_0.5	SB24_1.0	SB24_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007866	S24-Fe0007867	S24-Fe0007868	S24-Fe0007869
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1	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	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	82	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-

Client Sample ID			SB24_3.0	SB24_4.0	SB24_5.0	SB24_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007870	S24-Fe0007871	S24-Fe0007872	S24-Fe0007873
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB24_3.0	SB24_4.0	SB24_5.0	SB24_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007870	S24-Fe0007871	S24-Fe0007872	S24-Fe0007873
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	75	86	84	66
Toluene-d8 (surr.)	1	%	73	83	82	58
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB24_3.0	SB24_4.0	SB24_5.0	SB24_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007870	S24-Fe0007871	S24-Fe0007872	S24-Fe0007873
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	83	82	80
p-Terphenyl-d14 (surr.)	1	%	95	105	98	99
Heavy Metals						
Arsenic	2	mg/kg	4.3	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	5.8	< 5	< 5	< 5
Copper	5	mg/kg	< 5	37	< 5	< 5
Lead	5	mg/kg	< 5	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	65	< 5	6.6	< 5
Sample Properties						
% Moisture	1	%	16	18	12	18
Total Organic Carbon	0.1	%	1.1	0.8	0.5	-

Client Sample ID			[G01]SB24_7.0	[G01]SB24_7.2	[G01]SB24_7.3	[G01]SB24_7.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007874	S24-Fe0007875	S24-Fe0007876	S24-Fe0007877
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 100	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 100	-	-	-

Client Sample ID			[G01]SB24_7.0	[G01]SB24_7.2	[G01]SB24_7.3	[G01]SB24_7.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007874	S24-Fe0007875	S24-Fe0007876	S24-Fe0007877
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 100	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 2.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 2.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 2.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 2.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 2.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 2.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 2.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 2.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 2.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 2.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 2.5	-	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 2.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 2.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 2.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 2.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 2.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 2.5	-	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 2.5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 2.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 2.5	-	-	-
Allyl chloride	0.5	mg/kg	< 2.5	-	-	-
Benzene	0.1	mg/kg	< 0.5	-	-	-
Bromobenzene	0.5	mg/kg	< 2.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 2.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 2.5	-	-	-
Bromoform	0.5	mg/kg	< 2.5	-	-	-
Bromomethane	0.5	mg/kg	< 2.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 2.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 2.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 2.5	-	-	-
Chloroethane	0.5	mg/kg	< 2.5	-	-	-
Chloroform	0.5	mg/kg	< 2.5	-	-	-
Chloromethane	0.5	mg/kg	< 2.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	6.1	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 2.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 2.5	-	-	-
Dibromomethane	0.5	mg/kg	< 2.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 2.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.5	-	-	-
Iodomethane	0.5	mg/kg	< 2.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 2.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 1	-	-	-

Client Sample ID			[G01]SB24_7.0	[G01]SB24_7.2	[G01]SB24_7.3	[G01]SB24_7.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007874	S24-Fe0007875	S24-Fe0007876	S24-Fe0007877
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Methylene Chloride	0.5	mg/kg	< 2.5	-	-	-
o-Xylene	0.1	mg/kg	< 0.5	-	-	-
Styrene	0.5	mg/kg	< 2.5	-	-	-
Tetrachloroethene	0.5	mg/kg	72	-	-	-
Toluene	0.1	mg/kg	< 0.5	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 2.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 2.5	-	-	-
Trichloroethene	0.5	mg/kg	4.1	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 2.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 2.5	-	-	-
Xylenes - Total*	0.3	mg/kg	< 1.5	-	-	-
Total MAH*	0.5	mg/kg	< 2.5	-	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	82.2	-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	82.2	-	-	-
4-Bromofluorobenzene (surr.)	1	%	115	-	-	-
Toluene-d8 (surr.)	1	%	115	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 2.5	-	-	-
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	-	-	-
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	%	80	-	-	-
p-Terphenyl-d14 (surr.)	1	%	97	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	-	-
Cadmium	0.4	mg/kg	< 0.4	-	-	-
Chromium	5	mg/kg	< 5	-	-	-
Copper	5	mg/kg	< 5	-	-	-
Lead	5	mg/kg	6.0	-	-	-
Mercury	0.1	mg/kg	< 0.1	-	-	-
Nickel	5	mg/kg	< 5	-	-	-
Zinc	5	mg/kg	< 5	-	-	-

Client Sample ID			[G01]SB24_7.0	[G01]SB24_7.2	[G01]SB24_7.3	[G01]SB24_7.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007874	S24-Fe0007875	S24-Fe0007876	S24-Fe0007877
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	19	17	15	16
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.1-Dichloroethene	0.5	mg/kg	-	< 2.5	< 1	< 1
1.1.1-Trichloroethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.1.2-Trichloroethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.2-Dibromoethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.2-Dichlorobenzene	0.5	mg/kg	-	< 2.5	< 1	< 1
1.2-Dichloroethane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.2-Dichloropropane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.2.3-Trichloropropane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.3-Dichlorobenzene	0.5	mg/kg	-	< 2.5	< 1	< 1
1.3-Dichloropropane	0.5	mg/kg	-	< 2.5	< 1	< 1
1.4-Dichlorobenzene	0.5	mg/kg	-	< 2.5	< 1	< 1
Bromodichloromethane	0.5	mg/kg	-	< 2.5	< 1	< 1
Bromoform	0.5	mg/kg	-	< 2.5	< 1	< 1
Bromomethane	0.5	mg/kg	-	< 2.5	< 1	< 1
Carbon Tetrachloride	0.5	mg/kg	-	< 2.5	< 1	< 1
Chlorobenzene	0.5	mg/kg	-	< 2.5	< 1	< 1
Chloroform	0.5	mg/kg	-	< 2.5	< 1	< 1
Chloromethane	0.5	mg/kg	-	< 2.5	< 1	< 1
cis-1.2-Dichloroethene	0.5	mg/kg	-	35	27	16
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 2.5	< 1	< 1
Dibromochloromethane	0.5	mg/kg	-	< 2.5	< 1	< 1
Dibromomethane	0.5	mg/kg	-	< 2.5	< 1	< 1
Iodomethane	0.5	mg/kg	-	< 2.5	< 1	< 1
Methylene Chloride	0.5	mg/kg	-	< 2.5	< 1	< 1
Tetrachloroethene	0.5	mg/kg	-	3.4	< 1	< 1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 2.5	< 1	< 1
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 2.5	< 1	< 1
Trichloroethene	0.5	mg/kg	-	< 2.5	< 1	< 1
Trichlorofluoromethane	0.5	mg/kg	-	< 2.5	< 1	< 1
Vinyl chloride	0.5	mg/kg	-	< 2.5	< 1	< 1
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	38.4	27	16
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	38.4	27	16
Toluene-d8 (surr.)	1	%	-	73	137	97

Client Sample ID			[G01]SB24_7.5	SB25_0.2	SB25_0.5	SB25_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007878	S24-Fe0007879	S24-Fe0007880	S24-Fe0007881
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	68	73	61
TRH C29-C36	50	mg/kg	-	53	110	54
TRH C10-C36 (Total)	50	mg/kg	-	121	183	115
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	110	150	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	110	150	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

Client Sample ID			[G01]SB24_7.5	SB25_0.2	SB25_0.5	SB25_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007878	S24-Fe0007879	S24-Fe0007880	S24-Fe0007881
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	1.0	0.7	1.3
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	1	0.7	1.3
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	1	0.7	1.3
4-Bromofluorobenzene (surr.)	1	%	-	88	87	86
Toluene-d8 (surr.)	1	%	-	90	83	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	0.6	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	0.6	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	0.9	0.8
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	0.7	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	0.8	0.8
Total PAH*	0.5	mg/kg	-	< 0.5	3.6	1.6
2-Fluorobiphenyl (surr.)	1	%	-	77	94	93
p-Terphenyl-d14 (surr.)	1	%	-	76	80	89

Client Sample ID			[G01]SB24_7.5	SB25_0.2	SB25_0.5	SB25_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007878	S24-Fe0007879	S24-Fe0007880	S24-Fe0007881
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	3.5	12	5.7
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	11	9.5	11
Copper	5	mg/kg	-	21	13	19
Lead	5	mg/kg	-	76	150	240
Mercury	0.1	mg/kg	-	0.2	0.2	0.3
Nickel	5	mg/kg	-	15	< 5	9.4
Zinc	5	mg/kg	-	69	660	120
Sample Properties						
% Moisture	1	%	17	13	14	16
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 1	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.5	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.5	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.5	-
a-HCH	0.05	mg/kg	-	-	< 0.5	-
Aldrin	0.05	mg/kg	-	-	< 0.5	-
b-HCH	0.05	mg/kg	-	-	< 0.5	-
d-HCH	0.05	mg/kg	-	-	< 0.5	-
Dieldrin	0.05	mg/kg	-	-	< 0.5	-
Endosulfan I	0.05	mg/kg	-	-	< 0.5	-
Endosulfan II	0.05	mg/kg	-	-	< 0.5	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.5	-
Endrin	0.05	mg/kg	-	-	< 0.5	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.5	-
Endrin ketone	0.05	mg/kg	-	-	< 0.5	-
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.5	-
Heptachlor	0.05	mg/kg	-	-	< 0.5	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.5	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.5	-
Methoxychlor	0.05	mg/kg	-	-	< 0.5	-
Toxaphene	0.5	mg/kg	-	-	< 10	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.5	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	INT	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	95	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.5	-
Bolstar	0.2	mg/kg	-	-	< 0.5	-
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.5	-
Chlorpyrifos	0.2	mg/kg	-	-	< 0.5	-
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.5	-
Coumaphos	2	mg/kg	-	-	< 5	-
Demeton-S	0.2	mg/kg	-	-	< 0.5	-
Demeton-O	0.2	mg/kg	-	-	< 0.5	-
Diazinon	0.2	mg/kg	-	-	< 0.5	-
Dichlorvos	0.2	mg/kg	-	-	< 0.5	-

Client Sample ID			[G01]SB24_7.5	SB25_0.2	SB25_0.5	SB25_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007878	S24-Fe0007879	S24-Fe0007880	S24-Fe0007881
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	-	-	< 0.5	-
Disulfoton	0.2	mg/kg	-	-	< 0.5	-
EPN	0.2	mg/kg	-	-	< 0.5	-
Ethion	0.2	mg/kg	-	-	< 0.5	-
Ethoprop	0.2	mg/kg	-	-	< 0.5	-
Ethyl parathion	0.2	mg/kg	-	-	< 0.5	-
Fenitrothion	0.2	mg/kg	-	-	< 0.5	-
Fensulfothion	0.2	mg/kg	-	-	< 0.5	-
Fenthion	0.2	mg/kg	-	-	< 0.5	-
Malathion	0.2	mg/kg	-	-	< 0.5	-
Merphos	0.2	mg/kg	-	-	< 0.5	-
Methyl parathion	0.2	mg/kg	-	-	< 0.5	-
Mevinphos	0.2	mg/kg	-	-	< 0.5	-
Monocrotophos	2	mg/kg	-	-	< 5	-
Naled	0.2	mg/kg	-	-	< 0.5	-
Omethoate	2	mg/kg	-	-	< 5	-
Phorate	0.2	mg/kg	-	-	< 0.5	-
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.5	-
Pyrazophos	0.2	mg/kg	-	-	< 0.5	-
Ronnel	0.2	mg/kg	-	-	< 0.5	-
Terbufos	0.2	mg/kg	-	-	< 0.5	-
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.5	-
Tokuthion	0.2	mg/kg	-	-	< 0.5	-
Trichloronate	0.2	mg/kg	-	-	< 0.5	-
Triphenylphosphate (surr.)	1	%	-	-	69	-
Total Organic Carbon	0.1	%	-	-	2.1	-
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 1	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 1	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 1	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 1	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 1	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 1	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 1	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 1	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 1	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 1	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 1	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 1	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 1	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 1	-	-	-
Bromodichloromethane	0.5	mg/kg	< 1	-	-	-
Bromoform	0.5	mg/kg	< 1	-	-	-
Bromomethane	0.5	mg/kg	< 1	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 1	-	-	-
Chlorobenzene	0.5	mg/kg	< 1	-	-	-
Chloroform	0.5	mg/kg	< 1	-	-	-
Chloromethane	0.5	mg/kg	< 1	-	-	-

Client Sample ID			[G01]SB24_7.5	SB25_0.2	SB25_0.5	SB25_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007878	S24-Fe0007879	S24-Fe0007880	S24-Fe0007881
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
cis-1.2-Dichloroethene	0.5	mg/kg	23	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 1	-	-	-
Dibromochloromethane	0.5	mg/kg	< 1	-	-	-
Dibromomethane	0.5	mg/kg	< 1	-	-	-
Iodomethane	0.5	mg/kg	< 1	-	-	-
Methylene Chloride	0.5	mg/kg	< 1	-	-	-
Tetrachloroethene	0.5	mg/kg	< 1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 1	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 1	-	-	-
Trichloroethene	0.5	mg/kg	< 1	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 1	-	-	-
Vinyl chloride	0.5	mg/kg	< 1	-	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	23	-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	23	-	-	-
Toluene-d8 (surr.)	1	%	54	-	-	-

Client Sample ID			SB25_2.0	SB25_3.0	SB25_4.0	SB25_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007882	S24-Fe0007883	S24-Fe0007884	S24-Fe0007885
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	56	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	56	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB25_2.0	SB25_3.0	SB25_4.0	SB25_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007882	S24-Fe0007883	S24-Fe0007884	S24-Fe0007885
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.4
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	1.1	< 0.5	< 0.5	1.4
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	1.1	< 0.5	< 0.5	1.4
4-Bromofluorobenzene (surr.)	1	%	61	85	89	INT
Toluene-d8 (surr.)	1	%	66	96	90	INT
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB25_2.0	SB25_3.0	SB25_4.0	SB25_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007882	S24-Fe0007883	S24-Fe0007884	S24-Fe0007885
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	1.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	78	74	95	77
p-Terphenyl-d14 (surr.)	1	%	76	100	108	98
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	62	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	17	5.9	< 5	< 5
Sample Properties						
% Moisture	1	%	6.1	20	14	15
Total Organic Carbon	0.1	%	-	-	0.4	1.2

Client Sample ID			SB25_6.0	SB25_6.8	SB25_6.9	SB25_7.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007886	S24-Fe0007887	S24-Fe0007888	S24-Fe0007889
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
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	67	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	67	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-

Client Sample ID			SB25_6.0	SB25_6.8	SB25_6.9	SB25_7.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007886	S24-Fe0007887	S24-Fe0007888	S24-Fe0007889
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
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	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-
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	-	-	-
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	1.3	-	-	-
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	-	-	-

Client Sample ID			SB25_6.0	SB25_6.8	SB25_6.9	SB25_7.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007886	S24-Fe0007887	S24-Fe0007888	S24-Fe0007889
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
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	1.3	-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	1.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	INT	-	-	-
Toluene-d8 (surr.)	1	%	INT	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
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	-	-	-
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	%	93	-	-	-
p-Terphenyl-d14 (surr.)	1	%	98	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	-	-
Cadmium	0.4	mg/kg	< 0.4	-	-	-
Chromium	5	mg/kg	< 5	-	-	-
Copper	5	mg/kg	< 5	-	-	-
Lead	5	mg/kg	< 5	-	-	-
Mercury	0.1	mg/kg	< 0.1	-	-	-
Nickel	5	mg/kg	< 5	-	-	-
Zinc	5	mg/kg	< 5	-	-	-

Client Sample ID			SB25_6.0	SB25_6.8	SB25_6.9	SB25_7.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007886	S24-Fe0007887	S24-Fe0007888	S24-Fe0007889
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	17	16	17	15
Total Organic Carbon	0.1	%	0.7	-	-	-
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	3.2	4.8	1.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	0.6	< 0.5	< 0.5
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	3.8	4.8	1.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	3.8	4.8	1.5
Toluene-d8 (surr.)	1	%	-	79	106	90

Client Sample ID			SB25_7.1	QC134	QC135	QC338 TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007890	S24-Fe0007891	S24-Fe0007892	S24-Fe0007893
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	< 20	-
TRH C15-C28	50	mg/kg	-	< 50	< 50	-
TRH C29-C36	50	mg/kg	-	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	-
TRH C6-C10	20	mg/kg	-	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	-
TRH >C10-C16	50	mg/kg	-	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	-
TRH >C16-C34	100	mg/kg	-	< 100	< 100	-
TRH >C34-C40	100	mg/kg	-	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	-
Allyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	0.6	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-

Client Sample ID			SB25_7.1	QC134	QC135	QC338 TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007890	S24-Fe0007891	S24-Fe0007892	S24-Fe0007893
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	-
Total MAH*	0.5	mg/kg	-	< 0.5	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	0.6	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	0.6	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	-	76	87	-
Toluene-d8 (surr.)	1	%	-	89	88	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	-
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	79	83	-
p-Terphenyl-d14 (surr.)	1	%	-	105	97	-

Client Sample ID			SB25_7.1	QC134	QC135	QC338 TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007890	S24-Fe0007891	S24-Fe0007892	S24-Fe0007893
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	< 2	3.3	-
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	-
Chromium	5	mg/kg	-	< 5	12	-
Copper	5	mg/kg	-	< 5	28	-
Lead	5	mg/kg	-	< 5	30	-
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	-
Nickel	5	mg/kg	-	< 5	5.1	-
Zinc	5	mg/kg	-	< 5	39	-
Sample Properties						
% Moisture	1	%	14	15	11	-
Halogenated 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	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	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 Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	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	2.4	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	-
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	-	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	2.4	-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	2.4	-	-	-
Toluene-d8 (surr.)	1	%	91	-	-	-

Client Sample ID			SB25_7.1	QC134	QC135	QC338 TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0007890	S24-Fe0007891	S24-Fe0007892	S24-Fe0007893
Date Sampled			Feb 02, 2024	Feb 02, 2024	Feb 02, 2024	Feb 02, 2024
Test/Reference	LOR	Unit				
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	%	-	-	-	112

Client Sample ID			QC438 TS
Sample Matrix			Soil
Eurofins Sample No.			S24-Fe0007894
Date Sampled			Feb 02, 2024
Test/Reference	LOR	Unit	
BTEX			
Benzene	1	%	88
Ethylbenzene	1	%	89
m&p-Xylenes	1	%	87
o-Xylene	1	%	92
Toluene	1	%	90
Xylenes - Total	1	%	90
4-Bromofluorobenzene (surr.)	1	%	88

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	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Feb 05, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Feb 05, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Feb 05, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
Organochlorine Pesticides	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Phenols (Halogenated)	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Organic Carbon	Melbourne	Feb 07, 2024	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Halogenated Volatile Organics	Sydney	Feb 06, 2024	7 Days
- Method: LTM-ORG-2150 VOCs by Purge Trap GCMS			
BTEX	Sydney	Feb 05, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			

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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
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NSW 2000

Order No.: PO021581
Report #: 1065190
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 7, 2024
Priority: 3 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	SB24_0.2	Feb 02, 2024		Soil	S24-Fe0007866								X	X	
2	SB24_0.5	Feb 02, 2024		Soil	S24-Fe0007867	X		X		X			X	X	
3	SB24_1.0	Feb 02, 2024		Soil	S24-Fe0007868	X							X	X	
4	SB24_2.0	Feb 02, 2024		Soil	S24-Fe0007869								X	X	
5	SB24_3.0	Feb 02, 2024		Soil	S24-Fe0007870		X						X	X	
6	SB24_4.0	Feb 02, 2024		Soil	S24-Fe0007871		X						X	X	
7	SB24_5.0	Feb 02, 2024		Soil	S24-Fe0007872		X						X	X	
8	SB24_6.0	Feb 02, 2024		Soil	S24-Fe0007873								X	X	
9	SB24_7.0	Feb 02, 2024		Soil	S24-Fe0007874								X	X	
10	SB24_7.2	Feb 02, 2024		Soil	S24-Fe0007875							X	X		
11	SB24_7.3	Feb 02, 2024		Soil	S24-Fe0007876							X	X		
12	SB24_7.4	Feb 02, 2024		Soil	S24-Fe0007877							X	X		

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

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Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
13	SB24_7.5	Feb 02, 2024		Soil	S24-Fe0007878							X	X		
14	SB25_0.2	Feb 02, 2024		Soil	S24-Fe0007879								X	X	
15	SB25_0.5	Feb 02, 2024		Soil	S24-Fe0007880	X	X			X			X	X	
16	SB25_1.0	Feb 02, 2024		Soil	S24-Fe0007881								X	X	
17	SB25_2.0	Feb 02, 2024		Soil	S24-Fe0007882	X							X	X	
18	SB25_3.0	Feb 02, 2024		Soil	S24-Fe0007883								X	X	
19	SB25_4.0	Feb 02, 2024		Soil	S24-Fe0007884		X						X	X	
20	SB25_5.0	Feb 02, 2024		Soil	S24-Fe0007885		X						X	X	
21	SB25_6.0	Feb 02, 2024		Soil	S24-Fe0007886		X						X	X	
22	SB25_6.8	Feb 02, 2024		Soil	S24-Fe0007887							X	X		
23	SB25_6.9	Feb 02, 2024		Soil	S24-Fe0007888							X	X		
24	SB25_7.0	Feb 02, 2024		Soil	S24-Fe0007889							X	X		
25	SB25_7.1	Feb 02, 2024		Soil	S24-Fe0007890							X	X		
26	QC134	Feb 02, 2024		Soil	S24-Fe0007891								X	X	
27	QC135	Feb 02, 2024		Soil	S24-Fe0007892								X	X	

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065190
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 7, 2024
Priority: 3 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	Total Organic Carbon	Phenols (Speciated)	BTEX	Suite B14: OCP/OPP	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set	Eurofins Suite B8	BTEX
Melbourne Laboratory - NATA # 1261 Site # 1254							X								
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X
28	QC338 TB	Feb 02, 2024		Soil	S24-Fe0007893				X						
29	QC438 TS	Feb 02, 2024		Soil	S24-Fe0007894										X
30	SB24_4.0	Feb 02, 2024		AUS Leachate	S24-Fe0007896						X	X			
31	SB24_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007897						X	X			
32	SB24_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007898						X	X			
33	SB24_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007899						X	X			
34	SB24_7.2	Feb 02, 2024		AUS Leachate	S24-Fe0007900						X	X			
35	SB24_7.3	Feb 02, 2024		AUS Leachate	S24-Fe0007901						X	X			
36	SB24_7.4	Feb 02, 2024		AUS Leachate	S24-Fe0007902						X	X			
37	SB24_7.5	Feb 02, 2024		AUS Leachate	S24-Fe0007903						X	X			
38	SB25_5.0	Feb 02, 2024		AUS Leachate	S24-Fe0007909						X	X			
39	SB25_6.0	Feb 02, 2024		AUS Leachate	S24-Fe0007910						X	X			
40	SB25_6.8	Feb 02, 2024		AUS Leachate	S24-Fe0007911						X	X			
41	SB25_6.9	Feb 02, 2024		AUS Leachate	S24-Fe0007912						X	X			
42	SB25_7.0	Feb 02, 2024		AUS Leachate	S24-Fe0007913						X	X			

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

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

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Melbourne Laboratory - NATA # 1261 Site # 1254		X								
Sydney Laboratory - NATA # 1261 Site # 18217	X		X	X	X	X	X	X	X	X
43 SB25_7.1 Feb 02, 2024 AUS Leachate S24-Fe0007914						X	X			
Test Counts	4	7	1	1	2	14	22	27	19	1

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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	
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							
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	
Benzene	mg/kg	< 0.1			0.1	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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	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	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	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	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	< 20			20	Pass	
Method Blank							
Halogenated 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	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	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 Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	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	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	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	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	95			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	
TRH >C10-C16	%	71			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	94			70-130	Pass	
1.1.1-Trichloroethane	%	83			70-130	Pass	
1.2-Dichlorobenzene	%	130			70-130	Pass	
1.2-Dichloroethane	%	112			70-130	Pass	
Benzene	%	96			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	109			70-130	Pass	
o-Xylene	%	118			70-130	Pass	
Toluene	%	108			70-130	Pass	
Trichloroethene	%	82			70-130	Pass	
Xylenes - Total*	%	112			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	87			70-130	Pass	
Acenaphthylene	%	86			70-130	Pass	
Anthracene	%	88			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	91			70-130	Pass	
Benzo(b&j)fluoranthene	%	83			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	84			70-130	Pass	
Chrysene	%	83			70-130	Pass	
Dibenz(a.h)anthracene	%	92			70-130	Pass	
Fluoranthene	%	90			70-130	Pass	
Fluorene	%	90			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	84			70-130	Pass	
Pyrene	%	89			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	114			80-120	Pass	
Cadmium	%	110			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	107			80-120	Pass	
Lead	%	110			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	%	99			80-120	Pass	
Nickel	%	106			80-120	Pass	
Zinc	%	106			80-120	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	77			70-130	Pass	
4.4'-DDD	%	85			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	86			70-130	Pass	
a-HCH	%	80			70-130	Pass	
Aldrin	%	81			70-130	Pass	
b-HCH	%	79			70-130	Pass	
d-HCH	%	78			70-130	Pass	
Dieldrin	%	83			70-130	Pass	
Endosulfan I	%	80			70-130	Pass	
Endosulfan II	%	74			70-130	Pass	
Endosulfan sulphate	%	86			70-130	Pass	
Endrin	%	82			70-130	Pass	
Endrin aldehyde	%	74			70-130	Pass	
Endrin ketone	%	83			70-130	Pass	
g-HCH (Lindane)	%	83			70-130	Pass	
Heptachlor	%	82			70-130	Pass	
Heptachlor epoxide	%	77			70-130	Pass	
Hexachlorobenzene	%	82			70-130	Pass	
Methoxychlor	%	79			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	111			70-130	Pass	
Dimethoate	%	86			70-130	Pass	
Ethion	%	82			70-130	Pass	
Fenitrothion	%	73			70-130	Pass	
Methyl parathion	%	101			70-130	Pass	
Mevinphos	%	99			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	88			25-140	Pass	
2.4-Dichlorophenol	%	89			25-140	Pass	
2.4.5-Trichlorophenol	%	82			25-140	Pass	
2.4.6-Trichlorophenol	%	84			25-140	Pass	
2.6-Dichlorophenol	%	88			25-140	Pass	
4-Chloro-3-methylphenol	%	88			25-140	Pass	
Pentachlorophenol	%	80			25-140	Pass	
Tetrachlorophenols - Total	%	79			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	75			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	75			25-140	Pass	
2-Nitrophenol	%	83			25-140	Pass	
2.4-Dimethylphenol	%	85			25-140	Pass	
2.4-Dinitrophenol	%	86			25-140	Pass	
2-Methylphenol (o-Cresol)	%	90			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	90			25-140	Pass	
4-Nitrophenol	%	83			25-140	Pass	
Dinoseb	%	75			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenol	%	90			25-140	Pass	
LCS - % Recovery							
Total Organic Carbon	%	102			70-130	Pass	
LCS - % Recovery							
Halogenated Volatile Organics							
1.1-Dichloroethene	%	82			70-130	Pass	
1.1.1-Trichloroethane	%	78			70-130	Pass	
1.2-Dichlorobenzene	%	86			70-130	Pass	
1.2-Dichloroethane	%	99			70-130	Pass	
Trichloroethene	%	81			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	91			70-130	Pass	
Toluene	%	101			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	101			70-130	Pass	
o-Xylene	%	109			70-130	Pass	
Xylenes - Total*	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Fe0001337	NCP	%	128			70-130	Pass	
TRH >C10-C16	S24-Fe0001337	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S24-Fe0005787	NCP	%	113			70-130	Pass	
Acenaphthylene	S24-Fe0005787	NCP	%	93			70-130	Pass	
Anthracene	S24-Fe0005787	NCP	%	118			70-130	Pass	
Benz(a)anthracene	S24-Fe0005787	NCP	%	91			70-130	Pass	
Benzo(a)pyrene	S24-Fe0005787	NCP	%	110			70-130	Pass	
Benzo(b&j)fluoranthene	S24-Fe0005787	NCP	%	76			70-130	Pass	
Benzo(g.h.i)perylene	S24-Fe0005787	NCP	%	76			70-130	Pass	
Benzo(k)fluoranthene	S24-Fe0005787	NCP	%	124			70-130	Pass	
Chrysene	S24-Fe0005787	NCP	%	115			70-130	Pass	
Dibenz(a.h)anthracene	S24-Fe0005787	NCP	%	104			70-130	Pass	
Fluoranthene	S24-Fe0005787	NCP	%	118			70-130	Pass	
Fluorene	S24-Fe0005787	NCP	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S24-Fe0005787	NCP	%	112			70-130	Pass	
Naphthalene	S24-Fe0005787	NCP	%	110			70-130	Pass	
Phenanthrene	S24-Fe0005787	NCP	%	85			70-130	Pass	
Pyrene	S24-Fe0005787	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Fe0007350	NCP	%	101			75-125	Pass	
Cadmium	S24-Fe0007350	NCP	%	102			75-125	Pass	
Chromium	S24-Fe0007350	NCP	%	112			75-125	Pass	
Copper	S24-Fe0007350	NCP	%	98			75-125	Pass	
Lead	S24-Fe0007350	NCP	%	86			75-125	Pass	
Mercury	S24-Fe0007350	NCP	%	100			75-125	Pass	
Nickel	S24-Fe0007350	NCP	%	108			75-125	Pass	
Zinc	S24-Ja0050332	NCP	%	98			75-125	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-Ja0051496	NCP	%	89			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDD	S24-Ja0051496	NCP	%	79			70-130	Pass	
4.4'-DDE	S24-Ja0051496	NCP	%	89			70-130	Pass	
4.4'-DDT	S24-Ja0051496	NCP	%	73			70-130	Pass	
a-HCH	S24-Ja0051496	NCP	%	82			70-130	Pass	
Aldrin	S24-Ja0051496	NCP	%	82			70-130	Pass	
b-HCH	S24-Ja0051496	NCP	%	85			70-130	Pass	
d-HCH	S24-Ja0051496	NCP	%	79			70-130	Pass	
Dieldrin	S24-Fe0000221	NCP	%	87			70-130	Pass	
Endosulfan I	S24-Ja0051496	NCP	%	81			70-130	Pass	
Endosulfan II	S24-Ja0051496	NCP	%	76			70-130	Pass	
Endrin	S24-Ja0051496	NCP	%	112			70-130	Pass	
Endrin aldehyde	S24-Ja0051496	NCP	%	103			70-130	Pass	
g-HCH (Lindane)	S24-Ja0051496	NCP	%	94			70-130	Pass	
Heptachlor	S24-Ja0051496	NCP	%	87			70-130	Pass	
Heptachlor epoxide	S24-Ja0051496	NCP	%	87			70-130	Pass	
Hexachlorobenzene	S24-Ja0051496	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-Ja0035600	NCP	%	72			70-130	Pass	
TRH C6-C10	S24-Ja0035600	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Endrin ketone	S24-Fe0000109	NCP	%	95			70-130	Pass	
Methoxychlor	S24-Fe0000109	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S24-Fe0007888	CP	%	102			70-130	Pass	
1.1.1-Trichloroethane	S24-Fe0007888	CP	%	72			70-130	Pass	
1.2-Dichlorobenzene	S24-Fe0007888	CP	%	113			70-130	Pass	
1.2-Dichloroethane	S24-Fe0007888	CP	%	119			70-130	Pass	
Benzene	S24-Fe0007888	CP	%	82			70-130	Pass	
Ethylbenzene	S24-Fe0007888	CP	%	92			70-130	Pass	
m&p-Xylenes	S24-Fe0007888	CP	%	95			70-130	Pass	
o-Xylene	S24-Fe0007888	CP	%	92			70-130	Pass	
Toluene	S24-Fe0007888	CP	%	115			70-130	Pass	
Trichloroethene	S24-Fe0007888	CP	%	84			70-130	Pass	
Xylenes - Total*	S24-Fe0007888	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Fe0007888	CP	%	101			70-130	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 C10-C14	S24-Fe0007357	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Fe0007357	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Fe0007357	NCP	mg/kg	100	85	17	30%	Pass	
TRH >C10-C16	S24-Fe0007357	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Fe0007357	NCP	mg/kg	110	< 100	18	30%	Pass	
TRH >C34-C40	S24-Fe0007357	NCP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-Fe0007867	CP	mg/kg	< 0.5	0.6	100	30%	Fail	Q15
Fluorene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0007867	CP	%	12	15	17	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-Fe0007867	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-Fe0007867	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S24-Fe0007867	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Dimethoate	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S24-Fe0007867	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S24-Fe0007867	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S24-Fe0007867	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S24-Fe0007867	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S24-Fe0007867	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S24-Fe0007867	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S24-Fe0007867	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S24-Fe0007867	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S24-Fe0007867	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S24-Fe0007867	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S24-Fe0007867	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S24-Fe0007867	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-Fe0007867	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S24-Fe0007867	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S24-Fe0007867	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S24-Fe0007867	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Total Organic Carbon	B24-Fe0012983	NCP	%	0.9	0.8	9.9	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Fe0007873	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-Fe0007873	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S24-Fe0007873	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S24-Fe0007873	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S24-Fe0007873	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S24-Fe0007873	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S24-Fe0007873	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0007873	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	S24-Fe0007873	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Fe0007874	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C6-C10	S24-Fe0007874	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
2-Butanone (MEK)	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Allyl chloride	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Benzene	S24-Fe0007874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Bromochloromethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Bromoform	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Bromomethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Carbon disulfide	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Chloroethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Chloroform	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Chloromethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Fe0007874	CP	mg/kg	6.1	5.3	15	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Dibromomethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Dichlorodifluoromethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Ethylbenzene	S24-Fe0007874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
m&p-Xylenes	S24-Fe0007874	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Methylene Chloride	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
o-Xylene	S24-Fe0007874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0007874	CP	mg/kg	72	60	18	30%	Pass	
Toluene	S24-Fe0007874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Trichloroethene	S24-Fe0007874	CP	mg/kg	4.1	3.6	13	30%	Pass	
Trichlorofluoromethane	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Xylenes - Total*	S24-Fe0007874	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Fe0007874	CP	mg/kg	< 2.5	< 2.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0007878	CP	%	17	18	3.3	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0007879	CP	mg/kg	3.5	7.6	74	30%	Fail	Q15
Cadmium	S24-Fe0007879	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Fe0007879	CP	mg/kg	11	16	40	30%	Fail	Q15
Copper	S24-Fe0007879	CP	mg/kg	21	17	19	30%	Pass	
Mercury	S24-Fe0007879	CP	mg/kg	0.2	0.2	8.7	30%	Pass	
Nickel	S24-Fe0007879	CP	mg/kg	15	13	19	30%	Pass	
Zinc	S24-Fe0007879	CP	mg/kg	69	66	4.3	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Fe0007887	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-Fe0007887	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S24-Fe0007887	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Ethylbenzene	S24-Fe0007887	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S24-Fe0007887	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S24-Fe0007887	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0007887	CP	mg/kg	0.6	0.6	<1	30%	Pass	
Toluene	S24-Fe0007887	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0007887	CP	mg/kg	< 0.5	0.5	6.3	30%	Pass	
Xylenes - Total*	S24-Fe0007887	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Fe0007887	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0007888	CP	%	17	16	2.2	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0007891	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S24-Fe0007891	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Fe0007891	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S24-Fe0007891	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S24-Fe0007891	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S24-Fe0007891	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Fe0007891	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-Fe0007891	CP	mg/kg	< 5	< 5	<1	30%	Pass	

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
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
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.

Authorised by:

Adam Bateup	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Maria Tian	Senior Analyst-Organic
Mary Makarios	Senior Analyst-Inorganic
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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.

Chain of Custody Documentation

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Laboratory: mgt/Eurofins NSW
Address:
Contact: Sample Receipt
Phone:

Job Number:	S19142	**Purchase Order:**	PO021581
Project Name:	Lawrence drycleaners stage 2 SB's	**Quote No:**	230515Senn-1
Sampled By:	Matt Linz	**Turn Around Time:**	Standard TAT (5day)
Project Manager:	MB	**Page:**	1 of 1
Email Report To:	Matt.Beasley@senversa.com.au Matthew.linz@senversa.com Bec.chapple@senversa.com.au	**Phone/Mobile:**	435895069

Sample Information					Container Information		Analysis Required													
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles	HALVOL	Suit B8	TCLP B(a)P	TCLP Lead	Asbestos Nepm	VOC	Btexn	Phenols/OCPs/OPPs			HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	SB20_0.2	Soil	1/31/2024	-	Jar +Bag	2												
	SB20_0.5	Soil	1/31/2024	-	Jar +Bag	2		x			x			x				
	SB20_1.0	Soil	1/31/2024	-	Jar +Bag	2												
	SB20_2.0	Soil	1/31/2024	-	Jar +Bag	2		x			x							
	SB20_3.0	Soil	1/31/2024	-	Jar	1												
	SB20_4.0	Soil	1/31/2024	-	Jar	1		x										
	SB20_5.0	Soil	1/31/2024	-	Jar	1												
	SB20_6.0	Soil	1/31/2024	-	Jar	1		x										
	SB20_6.1	Soil	1/31/2024	-	Jar	1						x						
	SB20_7.0	Soil	1/31/2024	-	Jar	1												
	SB19_0.2	Soil	1/31/2024	-	Jar+ Bag	2		x			x			x				
	SB19_0.5	Soil	1/31/2024	-	Jar+ Bag	2												
	SB19_1.0	Soil	1/31/2024	-	Jar+ Bag	2		x										
	SB19_1.5	Soil	1/31/2024	-	Jar+ Bag	2												
	SB19_2.0	Soil	1/31/2024	-	Jar+ Bag	2												
	SB19_3.0	Soil	1/31/2024	-	Jar	1		x										
	SB19_4.0	Soil	1/31/2024	-	Jar	1												
	SB19_5.0	Soil	1/31/2024	-	Jar	1												
	SB19_6.0	Soil	1/31/2024	-	Jar	1		x				x		x				
	SB19_6.5	Soil	1/31/2024	-	Jar	1												
	SB19_7.0	Soil	1/31/2024	-	Jar	1												
	SB23_0.2	Soil	1/31/2024	-	Jar+ Bag	2												
	SB23_0.5	Soil	1/31/2024	-	Jar+ Bag	2		x			x			x				
	SB23_1.0	Soil	1/31/2024	-	Jar+ Bag	2												
	SB23_2.0	Soil	1/31/2024	-	Jar+ Bag	2		x										
	SB23_3.0	Soil	1/31/2024	-	Jar+ Bag	2		x										
	SB23_4.0	Soil	1/31/2024	-	Jar	1												
	SB23_5.0	Soil	1/31/2024	-	Jar	1		x										
	MW124-0.2	Soil	1/31/2024	-	Jar+ Bag	2												
	MW124-0.5	Soil	1/31/2024	-	Jar+ Bag	2		x			x			x				
	MW124-1.0	Soil	1/31/2024	-	Jar+ Bag	2												
	MW124-2.0	Soil	1/31/2024	-	Jar+ Bag	2		x										
	MW124-3.0	Soil	1/31/2024	-	Jar	1		x										
	MW124-4.0	Soil	1/31/2024	-	Jar	1												
	MW124-5.0	Soil	1/31/2024	-	Jar	1		x										
	MW124-6.0	Soil	1/31/2024	-	Jar	1												
	MW124-6.15	Soil	1/31/2024	-	Jar	1						x						

Completed by: _____
Checked by: _____

1065526

	MW124-7.16	Soil	1/31/2024	-	Jar	1												
	SB22_0.2	Soil	1/31/2024	-	Jar+ Bag	2												
	SB22_0.5	Soil	1/31/2024	-	Jar+ Bag	2	x			x			x					
	SB22_1.0	Soil	1/31/2024	-	Jar+ Bag	2												
	SB22_2.0	Soil	1/31/2024	-	Jar+ Bag	2	x											
	SB22_3.0	Soil	1/31/2024	-	Jar	1	x											
	SB22_4.0	Soil	1/31/2024	-	Jar	1												
	SB22_5.0	Soil	1/31/2024	-	Jar	1												
	SB22_6.0	Soil	1/31/2024	-	Jar	1	x											
	SB21_0.2	Soil	2/1/2024	-	Jar+ Bag	2												
	SB21_0.5	Soil	2/1/2024	-	Jar+ Bag	2	x			x			x					
	SB21_1.0	Soil	2/1/2024	-	Jar+ Bag	2												
	SB21_2.0	Soil	2/1/2024	-	Jar+ Bag	2	x											
	SB21_3.0	Soil	2/1/2024	-	Jar	1												
	SB21_4.0	Soil	2/1/2024	-	Jar	1	x											
	SB21_5.0	Soil	2/1/2024	-	Jar	1												
	SB26_0.2	Soil	2/1/2024	-	Jar+ Bag	2												
	SB26_0.5	Soil	2/1/2024	-	Jar+ Bag	2	x			x			x					
	SB26_1.0	Soil	2/1/2024	-	Jar+ Bag	2												
	SB26_2.0	Soil	2/1/2024	-	Jar+ Bag	2	x											
	SB26_3.0	Soil	2/1/2024	-	Jar	1												
	SB26_4.0	Soil	2/1/2024	-	Jar	1												
	SB26_5.0	Soil	2/1/2024	-	Jar	1	x											
	SB26_6.0	Soil	2/1/2024	-	Jar	1						x						
	SB26_7.0	Soil	2/1/2024	-	Jar	1												
	SB27_0.2	Soil	2/1/2024	-	Jar+ Bag	2												
	SB27_0.5	Soil	2/1/2024	-	Jar+ Bag	2	x			x			x					
	SB27_1.0	Soil	2/1/2024	-	Jar+ Bag	2												
	SB27_2.0	Soil	2/1/2024	-	Jar+ Bag	2	x											
	SB27_3.0	Soil	2/1/2024	-	Jar	1	x											
	SB27_4.0	Soil	2/1/2024	-	Jar	1												
	SB27_5.0	Soil	2/1/2024	-	Jar	1						x						
	SB27_6.0	Soil	2/1/2024	-	Jar	1						x						
	SB27_6.5	Soil	2/1/2024	-	Jar	1												
	QC136	Soil	2/1/2024	-	Jar	1	x											
	QC137	Soil	2/1/2024	-	Jar	1	x											
	QC138	Soil	2/1/2024	-	Jar	1	x											
	QC139	Soil	2/1/2024	-	Jar	1	x											
QC338		Soil	2/1/2024	-	vial	1						x						TB
QC438		Soil	2/1/2024	-	vial	1							x					TS
Total																		

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:	**Sampler Name:** Matthew Linz	**Signature:**  **Date:** 2/1/2024
Relinquished By: Matthew Linz	**Method of Shipment (if applicable):**	**Received by:**

Completed by: _____

Checked by: _____

1065526

Name/Signature:	2/1/2024	Carrier / Reference #:	Name/Signature: Elizabeth Brotherton GB	Date: 2/2	
Of:	Time: 7:58	Date/Time:	Of:	Time: 9:13pm	
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:	
Of:	Time:	Date/Time:	Of:	Time:	
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:	
Of:	Time:	Date/Time:	Of:	Time:	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

10.1°C

Completed by: _____

Checked by: _____

1065526

RE: Eurofins Sample Receipt Advice - Report 1065526 : Site LAWRENCE DRYCLEANERS STAGE 2 SB'S (S19142)

Matthew Linz <Matthew.Linz@senversa.com.au>

Tue 2024-02-06 1:35 PM

To:#AU25_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>
Cc:Bec Chapple <bec.chapple@senversa.com.au>;Matt Beasley <Matt.Beasley@senversa.com.au>

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins. Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hello Elizabeth

- "No asbestos bag received for sample SB27_2.0" that's fine
- MW124-7.16 change to MW124-7.6 and analyse accordingly.
- MW124-7.0 Change to MW124-6.15 and analyse accordingly.
- "Bags labelled SB18_0.2, SB18_0.5 and SB18_1.0." fine to stay on hold

Thankyou !

senversa

Matthew Linz
Senior Environmental Scientist
M: +61 435 895 069
www.senversa.com.au
Level 24, 1 Market St,Djubuguli, Eora Country
Sydney, NSW, 2000, Australia

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Tuesday, February 6, 2024 8:37 AM
To: Matt Beasley <Matt.Beasley@senversa.com.au>
Cc: Bec Chapple <bec.chapple@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: Eurofins Sample Receipt Advice - Report 1065526 : Site LAWRENCE DRYCLEANERS STAGE 2 SB'S (S19142)

Dear Valued Client,

No jar received for sample MW124-6.15. Analysis cancelled. No asbestos bag received for sample SB27_2.0. No jar received for sample MW124-7.16. Analysis cancelled. Received extra jars labelled MW124-7.0 and MW124-7.6. Logged on hold. Received extra asbestos bags labelled SB18_0.2, SB18_0.5 and SB18_1.0. Logged on hold.

Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins Analytical Services Manager as soon as possible to make certain that they get changed.

Regards,
Elizabeth Brotherton

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www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID:	S19142
Turnaround time:	5 Day
Date/Time received	Feb 2, 2024 9:13 PM
Eurofins reference	1065526

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.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

No jar received for sample MW124-6.15. Analysis cancelled. No asbestos bag received for sample SB27_2.0. No jar received for sample MW124-7.16. Analysis cancelled. Received extra jars labelled MW124-7.0 and MW124-7.6. Logged on hold. Received extra asbestos bags labelled SB18_0.2, SB18_0.5 and SB18_1.0. Logged on hold.
Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	SB20_0.5	Jan 31, 2024		Soil	S24-Fe0010820	X			X	X		X	X		
2	SB20_2.0	Jan 31, 2024		Soil	S24-Fe0010821	X						X	X		
3	SB20_4.0	Jan 31, 2024		Soil	S24-Fe0010822							X	X		
4	SB20_6.0	Jan 31, 2024		Soil	S24-Fe0010823							X	X		
5	SB20_6.1	Jan 31, 2024		Soil	S24-Fe0010824						X	X			
6	SB19_0.2	Jan 31, 2024		Soil	S24-Fe0010825	X			X	X		X	X		
7	SB19_1.0	Jan 31, 2024		Soil	S24-Fe0010826							X	X		
8	SB19_3.0	Jan 31, 2024		Soil	S24-Fe0010827							X	X		
9	SB19_6.0	Jan 31, 2024		Soil	S24-Fe0010828				X	X		X	X		
10	SB23_0.5	Jan 31, 2024		Soil	S24-Fe0010829	X			X	X		X	X		
11	SB23_2.0	Jan 31, 2024		Soil	S24-Fe0010830							X	X		
12	SB23_3.0	Jan 31, 2024		Soil	S24-Fe0010831							X	X		
13	SB23_5.0	Jan 31, 2024		Soil	S24-Fe0010832							X	X		

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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Site# 1254

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1277 Cameron Road,
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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
14	MW124-0.5	Jan 31, 2024		Soil	S24-Fe0010833	X			X	X		X	X		
15	MW124-2.0	Jan 31, 2024		Soil	S24-Fe0010834							X	X		
16	MW124-3.0	Jan 31, 2024		Soil	S24-Fe0010835							X	X		
17	MW124-5.0	Jan 31, 2024		Soil	S24-Fe0010836							X	X		
18	MW124-6.15	Jan 31, 2024		Soil	S24-Fe0010837		X								
19	SB22_0.5	Jan 31, 2024		Soil	S24-Fe0010838	X			X	X		X	X		
20	SB22_2.0	Jan 31, 2024		Soil	S24-Fe0010839							X	X		
21	SB22_3.0	Jan 31, 2024		Soil	S24-Fe0010840							X	X		
22	SB22_6.0	Jan 31, 2024		Soil	S24-Fe0010841							X	X		
23	SB21_0.5	Jan 02, 2024		Soil	S24-Fe0010842	X			X	X		X	X		
24	SB21_2.0	Jan 02, 2024		Soil	S24-Fe0010843							X	X		
25	SB21_4.0	Jan 02, 2024		Soil	S24-Fe0010844							X	X		
26	SB26_0.5	Jan 02, 2024		Soil	S24-Fe0010845	X			X	X		X	X		
27	SB26_2.0	Jan 02, 2024		Soil	S24-Fe0010846							X	X		
28	SB26_5.0	Jan 02, 2024		Soil	S24-Fe0010847							X	X		
29	SB26_6.0	Jan 02, 2024		Soil	S24-Fe0010848						X	X			

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Company Name: Senversa Pty Ltd NSW
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Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
30	SB27_0.5	Jan 02, 2024		Soil	S24-Fe0010849	X			X	X		X	X		
31	SB27_2.0	Jan 02, 2024		Soil	S24-Fe0010850							X	X		
32	SB27_3.0	Jan 02, 2024		Soil	S24-Fe0010851							X	X		
33	SB27_5.0	Jan 02, 2024		Soil	S24-Fe0010852						X	X			
34	SB27_6.0	Jan 02, 2024		Soil	S24-Fe0010853						X	X			
35	QC136	Jan 02, 2024		Soil	S24-Fe0010854							X	X		
36	QC137	Jan 02, 2024		Soil	S24-Fe0010855							X	X		
37	QC138	Jan 02, 2024		Soil	S24-Fe0010856							X	X		
38	QC139	Jan 02, 2024		Soil	S24-Fe0010857							X	X		
39	QC338	Jan 02, 2024		Trip Blank (solid)	S24-Fe0010858									X	
40	QC438	Jan 02, 2024		Trip Spike (solid)	S24-Fe0010859										X
41	SB20_0.2	Jan 31, 2024		Soil	S24-Fe0010861			X							
42	SB20_1.0	Jan 31, 2024		Soil	S24-Fe0010862			X							
43	SB20_3.0	Jan 31, 2024		Soil	S24-Fe0010863			X							

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Project ID: S19142

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Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
44	SB20_5.0	Jan 31, 2024		Soil	S24-Fe0010864			X							
45	SB20_7.0	Jan 31, 2024		Soil	S24-Fe0010865			X							
46	SB19_0.5	Jan 31, 2024		Soil	S24-Fe0010866			X							
47	SB19_1.5	Jan 31, 2024		Soil	S24-Fe0010867			X							
48	SB19_2.0	Jan 31, 2024		Soil	S24-Fe0010868			X							
49	SB19_4.0	Jan 31, 2024		Soil	S24-Fe0010869			X							
50	SB19_5.0	Jan 31, 2024		Soil	S24-Fe0010870			X							
51	SB19_6.5	Jan 31, 2024		Soil	S24-Fe0010871			X							
52	SB19_7.0	Jan 31, 2024		Soil	S24-Fe0010872			X							
53	SB23_0.2	Jan 31, 2024		Soil	S24-Fe0010873			X							
54	SB23_1.0	Jan 31, 2024		Soil	S24-Fe0010874			X							
55	SB23_4.0	Jan 31, 2024		Soil	S24-Fe0010875			X							
56	MW124-0.2	Jan 31, 2024		Soil	S24-Fe0010876			X							
57	MW124-1.0	Jan 31, 2024		Soil	S24-Fe0010877			X							
58	MW124-4.0	Jan 31, 2024		Soil	S24-Fe0010878			X							
59	MW124-6.0	Jan 31, 2024		Soil	S24-Fe0010879			X							

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Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
60	MW124-7.16	Jan 31, 2024		Soil	S24-Fe0010880			X							
61	SB22_0.2	Jan 31, 2024		Soil	S24-Fe0010881			X							
62	SB22_1.0	Jan 31, 2024		Soil	S24-Fe0010882			X							
63	SB22_4.0	Jan 31, 2024		Soil	S24-Fe0010883			X							
64	SB22_5.0	Jan 31, 2024		Soil	S24-Fe0010884			X							
65	SB21_0.2	Jan 02, 2024		Soil	S24-Fe0010885			X							
66	SB21_1.0	Jan 02, 2024		Soil	S24-Fe0010886			X							
67	SB21_3.0	Jan 02, 2024		Soil	S24-Fe0010887			X							
68	SB21_5.0	Jan 02, 2024		Soil	S24-Fe0010888			X							
69	SB26_0.2	Jan 02, 2024		Soil	S24-Fe0010889			X							
70	SB26_1.0	Jan 02, 2024		Soil	S24-Fe0010890			X							
71	SB26_3.0	Jan 02, 2024		Soil	S24-Fe0010891			X							
72	SB26_4.0	Jan 02, 2024		Soil	S24-Fe0010892			X							
73	SB26_7.0	Jan 02, 2024		Soil	S24-Fe0010893			X							
74	SB27_0.2	Jan 02, 2024		Soil	S24-Fe0010894			X							
75	SB27_1.0	Jan 02, 2024		Soil	S24-Fe0010895			X							

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Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
76	SB27_4.0	Jan 02, 2024		Soil	S24-Fe0010896			X							
77	SB27_6.5	Jan 02, 2024		Soil	S24-Fe0010897			X							
78	MW124-6.15	Jan 31, 2024		Soil	S24-Fe0010962						X	X			
79	MW124-7.16	Jan 31, 2024		Soil	S24-Fe0010963			X							
80	SB18_0.2	Jan 31, 2024		Soil	S24-Fe0010964			X							
81	SB18_0.5	Jan 31, 2024		Soil	S24-Fe0010965			X							
82	SB18_1.0	Jan 31, 2024		Soil	S24-Fe0010966			X							
Test Counts						9	1	41	9	9	5	38	33	1	1

Certificate of Analysis

Senversa Pty Ltd NSW
Level 24, 1 Market Street
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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
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.

Attention:	Matt Beasley
Report	1065526-AID
Project Name	LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID	S19142
Received Date	Feb 02, 2024
Date Reported	Feb 12, 2024

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 LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID S19142
Date Sampled Jan 02, 2024 to Jan 31, 2024
Report 1065526-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SB20_0.5	24-Fe0010820	Jan 31, 2024	Approximate Sample 682g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB20_2.0	24-Fe0010821	Jan 31, 2024	Approximate Sample 433g Sample consisted of: Brown coarse-grained sandy soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB19_0.2	24-Fe0010825	Jan 31, 2024	Approximate Sample 485g Sample consisted of: Brown coarse grained sandy clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB23_0.5	24-Fe0010829	Jan 31, 2024	Approximate Sample 441g Sample consisted of: Brown coarse grained sandy clayey soil, cement, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
MW124-0.5	24-Fe0010833	Jan 31, 2024	Approximate Sample 820g Sample consisted of: Brown coarse-grained sandy soil, brick, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB22_0.5	24-Fe0010838	Jan 31, 2024	Approximate Sample 531g Sample consisted of: Brown coarse-grained sandy soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB21_0.5	24-Fe0010842	Jan 02, 2024	Approximate Sample 525g Sample consisted of: Brown coarse-grained sandy soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
SB26_0.5	24-Fe0010845	Jan 02, 2024	Approximate Sample 564g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SB27_0.5	24-Fe0010849	Jan 02, 2024	Approximate Sample 501g Sample consisted of: Brown coarse-grained sandy soil, coal, cement and rocks	No asbestos detected at the reporting limit of 0.001% 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	Feb 06, 2024	Indefinite

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	SB20_0.5	Jan 31, 2024		Soil	S24-Fe0010820	X			X	X		X	X		
2	SB20_2.0	Jan 31, 2024		Soil	S24-Fe0010821	X						X	X		
3	SB20_4.0	Jan 31, 2024		Soil	S24-Fe0010822							X	X		
4	SB20_6.0	Jan 31, 2024		Soil	S24-Fe0010823							X	X		
5	SB20_6.1	Jan 31, 2024		Soil	S24-Fe0010824						X	X			
6	SB19_0.2	Jan 31, 2024		Soil	S24-Fe0010825	X			X	X		X	X		
7	SB19_1.0	Jan 31, 2024		Soil	S24-Fe0010826							X	X		
8	SB19_3.0	Jan 31, 2024		Soil	S24-Fe0010827							X	X		
9	SB19_6.0	Jan 31, 2024		Soil	S24-Fe0010828				X	X		X	X		
10	SB23_0.5	Jan 31, 2024		Soil	S24-Fe0010829	X			X	X		X	X		
11	SB23_2.0	Jan 31, 2024		Soil	S24-Fe0010830							X	X		
12	SB23_3.0	Jan 31, 2024		Soil	S24-Fe0010831							X	X		
13	SB23_5.0	Jan 31, 2024		Soil	S24-Fe0010832							X	X		

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NSW 2000

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
14	MW124-0.5	Jan 31, 2024		Soil	S24-Fe0010833	X			X	X		X	X		
15	MW124-2.0	Jan 31, 2024		Soil	S24-Fe0010834							X	X		
16	MW124-3.0	Jan 31, 2024		Soil	S24-Fe0010835							X	X		
17	MW124-5.0	Jan 31, 2024		Soil	S24-Fe0010836							X	X		
18	MW124-6.15	Jan 31, 2024		Soil	S24-Fe0010837		X								
19	SB22_0.5	Jan 31, 2024		Soil	S24-Fe0010838	X			X	X		X	X		
20	SB22_2.0	Jan 31, 2024		Soil	S24-Fe0010839							X	X		
21	SB22_3.0	Jan 31, 2024		Soil	S24-Fe0010840							X	X		
22	SB22_6.0	Jan 31, 2024		Soil	S24-Fe0010841							X	X		
23	SB21_0.5	Jan 02, 2024		Soil	S24-Fe0010842	X			X	X		X	X		
24	SB21_2.0	Jan 02, 2024		Soil	S24-Fe0010843							X	X		
25	SB21_4.0	Jan 02, 2024		Soil	S24-Fe0010844							X	X		
26	SB26_0.5	Jan 02, 2024		Soil	S24-Fe0010845	X			X	X		X	X		
27	SB26_2.0	Jan 02, 2024		Soil	S24-Fe0010846							X	X		
28	SB26_5.0	Jan 02, 2024		Soil	S24-Fe0010847							X	X		
29	SB26_6.0	Jan 02, 2024		Soil	S24-Fe0010848						X	X			

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
30	SB27_0.5	Jan 02, 2024		Soil	S24-Fe0010849	X			X	X		X	X		
31	SB27_2.0	Jan 02, 2024		Soil	S24-Fe0010850							X	X		
32	SB27_3.0	Jan 02, 2024		Soil	S24-Fe0010851							X	X		
33	SB27_5.0	Jan 02, 2024		Soil	S24-Fe0010852						X	X			
34	SB27_6.0	Jan 02, 2024		Soil	S24-Fe0010853						X	X			
35	QC136	Jan 02, 2024		Soil	S24-Fe0010854							X	X		
36	QC137	Jan 02, 2024		Soil	S24-Fe0010855							X	X		
37	QC138	Jan 02, 2024		Soil	S24-Fe0010856							X	X		
38	QC139	Jan 02, 2024		Soil	S24-Fe0010857							X	X		
39	QC338	Jan 02, 2024		Trip Blank (solid)	S24-Fe0010858									X	
40	QC438	Jan 02, 2024		Trip Spike (solid)	S24-Fe0010859										X
41	SB20_0.2	Jan 31, 2024		Soil	S24-Fe0010861			X							
42	SB20_1.0	Jan 31, 2024		Soil	S24-Fe0010862			X							
43	SB20_3.0	Jan 31, 2024		Soil	S24-Fe0010863			X							

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
44	SB20_5.0	Jan 31, 2024		Soil	S24-Fe0010864			X							
45	SB20_7.0	Jan 31, 2024		Soil	S24-Fe0010865			X							
46	SB19_0.5	Jan 31, 2024		Soil	S24-Fe0010866			X							
47	SB19_1.5	Jan 31, 2024		Soil	S24-Fe0010867			X							
48	SB19_2.0	Jan 31, 2024		Soil	S24-Fe0010868			X							
49	SB19_4.0	Jan 31, 2024		Soil	S24-Fe0010869			X							
50	SB19_5.0	Jan 31, 2024		Soil	S24-Fe0010870			X							
51	SB19_6.5	Jan 31, 2024		Soil	S24-Fe0010871			X							
52	SB19_7.0	Jan 31, 2024		Soil	S24-Fe0010872			X							
53	SB23_0.2	Jan 31, 2024		Soil	S24-Fe0010873			X							
54	SB23_1.0	Jan 31, 2024		Soil	S24-Fe0010874			X							
55	SB23_4.0	Jan 31, 2024		Soil	S24-Fe0010875			X							
56	MW124-0.2	Jan 31, 2024		Soil	S24-Fe0010876			X							
57	MW124-1.0	Jan 31, 2024		Soil	S24-Fe0010877			X							
58	MW124-4.0	Jan 31, 2024		Soil	S24-Fe0010878			X							
59	MW124-6.0	Jan 31, 2024		Soil	S24-Fe0010879			X							

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Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
60	MW124-7.16	Jan 31, 2024		Soil	S24-Fe0010880			X							
61	SB22_0.2	Jan 31, 2024		Soil	S24-Fe0010881			X							
62	SB22_1.0	Jan 31, 2024		Soil	S24-Fe0010882			X							
63	SB22_4.0	Jan 31, 2024		Soil	S24-Fe0010883			X							
64	SB22_5.0	Jan 31, 2024		Soil	S24-Fe0010884			X							
65	SB21_0.2	Jan 02, 2024		Soil	S24-Fe0010885			X							
66	SB21_1.0	Jan 02, 2024		Soil	S24-Fe0010886			X							
67	SB21_3.0	Jan 02, 2024		Soil	S24-Fe0010887			X							
68	SB21_5.0	Jan 02, 2024		Soil	S24-Fe0010888			X							
69	SB26_0.2	Jan 02, 2024		Soil	S24-Fe0010889			X							
70	SB26_1.0	Jan 02, 2024		Soil	S24-Fe0010890			X							
71	SB26_3.0	Jan 02, 2024		Soil	S24-Fe0010891			X							
72	SB26_4.0	Jan 02, 2024		Soil	S24-Fe0010892			X							
73	SB26_7.0	Jan 02, 2024		Soil	S24-Fe0010893			X							
74	SB27_0.2	Jan 02, 2024		Soil	S24-Fe0010894			X							
75	SB27_1.0	Jan 02, 2024		Soil	S24-Fe0010895			X							

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
76	SB27_4.0	Jan 02, 2024		Soil	S24-Fe0010896			X							
77	SB27_6.5	Jan 02, 2024		Soil	S24-Fe0010897			X							
78	MW124-6.15	Jan 31, 2024		Soil	S24-Fe0010962						X	X			
79	MW124-7.16	Jan 31, 2024		Soil	S24-Fe0010963			X							
80	SB18_0.2	Jan 31, 2024		Soil	S24-Fe0010964			X							
81	SB18_0.5	Jan 31, 2024		Soil	S24-Fe0010965			X							
82	SB18_1.0	Jan 31, 2024		Soil	S24-Fe0010966			X							
Test Counts						9	1	41	9	9	5	38	33	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. 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**). This estimate is not NATA-accredited.
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.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
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

24-Fe0010821 to 24-Fe0010829: Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

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:

Laxman Dias	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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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Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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Attention: **Matt Beasley**

Report **1065526-S**
Project name LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID S19142
Received Date Feb 02, 2024

Client Sample ID			**SB20_0.5**	**SB20_2.0**	**SB20_4.0**	**SB20_6.0**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-Fe0010820**	**S24-Fe0010821**	**S24-Fe0010822**	**S24-Fe0010823**
Date Sampled			**Jan 31, 2024**	**Jan 31, 2024**	**Jan 31, 2024**	**Jan 31, 2024**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	90	58	< 50	< 50
TRH C29-C36	50	mg/kg	60	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	150	58	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	140	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	140	< 100	< 100	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SB20_0.5	SB20_2.0	SB20_4.0	SB20_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010820	S24-Fe0010821	S24-Fe0010822	S24-Fe0010823
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	0.4	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	91	86	85	56
Toluene-d8 (surr.)	1	%	93	90	90	60
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB20_0.5	SB20_2.0	SB20_4.0	SB20_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010820	S24-Fe0010821	S24-Fe0010822	S24-Fe0010823
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	89	99	91	99
p-Terphenyl-d14 (surr.)	1	%	100	99	104	112
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	-	-	-
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	%	112	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	94	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			SB20_0.5	SB20_2.0	SB20_4.0	SB20_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010820	S24-Fe0010821	S24-Fe0010822	S24-Fe0010823
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	109	-	-	-
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	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	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			SB20_0.5	SB20_2.0	SB20_4.0	SB20_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010820	S24-Fe0010821	S24-Fe0010822	S24-Fe0010823
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Phenol-d6 (surr.)	1	%	90	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.4	2.6	< 2	2.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	< 5	< 5	< 5
Copper	5	mg/kg	27	17	< 5	< 5
Lead	5	mg/kg	23	85	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Nickel	5	mg/kg	5.3	< 5	< 5	< 5
Zinc	5	mg/kg	54	150	< 5	< 5
Sample Properties						
% Moisture	1	%	11	19	23	11

Client Sample ID			SB20_6.1	SB19_0.2	SB19_1.0	SB19_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010824	S24-Fe0010825	S24-Fe0010826	S24-Fe0010827
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	480	< 50	< 50
TRH C29-C36	50	mg/kg	-	520	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	1000	< 50	< 50
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	850	< 100	< 100
TRH >C34-C40	100	mg/kg	-	230	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	1080	< 100	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB20_6.1	SB19_0.2	SB19_1.0	SB19_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010824	S24-Fe0010825	S24-Fe0010826	S24-Fe0010827
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	66	93	82	75
Toluene-d8 (surr.)	1	%	64	99	88	72
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

Client Sample ID			SB20_6.1	SB19_0.2	SB19_1.0	SB19_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010824	S24-Fe0010825	S24-Fe0010826	S24-Fe0010827
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	0.6	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	1.1	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	106	81	90
p-Terphenyl-d14 (surr.)	1	%	-	120	88	108
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	-	-
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	%	-	148	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	113	-	-

Client Sample ID			SB20_6.1	SB19_0.2	SB19_1.0	SB19_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010824	S24-Fe0010825	S24-Fe0010826	S24-Fe0010827
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	143	-	-
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	-	-

Client Sample ID			SB20_6.1	SB19_0.2	SB19_1.0	SB19_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010824	S24-Fe0010825	S24-Fe0010826	S24-Fe0010827
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1	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	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	107	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Heavy Metals						
Arsenic	2	mg/kg	-	2.3	< 2	2.2
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	7.4	< 5	5.7
Copper	5	mg/kg	-	24	9.4	< 5
Lead	5	mg/kg	-	6.3	82	< 5
Mercury	0.1	mg/kg	-	0.1	0.2	< 0.1
Nickel	5	mg/kg	-	34	< 5	< 5
Zinc	5	mg/kg	-	58	66	< 5
Sample Properties						
% Moisture	1	%	19	21	15	14

Client Sample ID			SB19_6.0	[G01]SB23_0.5	SB23_2.0	SB23_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010828	S24-Fe0010829	S24-Fe0010830	S24-Fe0010831
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	140	570	220
TRH C29-C36	50	mg/kg	< 50	80	370	120
TRH C10-C36 (Total)	50	mg/kg	< 50	220	940	340
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	210	850	310
TRH >C34-C40	100	mg/kg	< 100	< 100	320	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	210	1170	310
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB19_6.0	[G01]SB23_0.5	SB23_2.0	SB23_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010828	S24-Fe0010829	S24-Fe0010830	S24-Fe0010831
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	8.7	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3

Client Sample ID			SB19_6.0	[G01]SB23_0.5	SB23_2.0	SB23_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010828	S24-Fe0010829	S24-Fe0010830	S24-Fe0010831
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	8.7	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	8.7	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	61	93	64	69
Toluene-d8 (surr.)	1	%	62	86	56	64
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	6.3	2.3	3.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	6.3	2.5	3.8
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	6.3	2.8	4.0
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	1.3	< 0.5	0.7
Benz(a)anthracene	0.5	mg/kg	< 0.5	4.1	1.5	1.9
Benzo(a)pyrene	0.5	mg/kg	< 0.5	4.2	1.8	2.8
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	2.7	1.3	1.9
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	2.5	1.0	1.3
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	3.5	1.1	1.8
Chrysene	0.5	mg/kg	< 0.5	3.8	1.8	2.8
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	0.8	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	7.3	3.5	3.6
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	2.2	0.7	1.1
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Phenanthrene	0.5	mg/kg	< 0.5	4.7	1.1	1.7
Pyrene	0.5	mg/kg	< 0.5	8.1	3.5	3.6
Total PAH*	0.5	mg/kg	< 0.5	46	17	24
2-Fluorobiphenyl (surr.)	1	%	105	83	94	80
p-Terphenyl-d14 (surr.)	1	%	124	93	112	89
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5	-	-
a-HCH	0.05	mg/kg	< 0.05	< 0.5	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.5	-	-
b-HCH	0.05	mg/kg	< 0.05	< 0.5	-	-
d-HCH	0.05	mg/kg	< 0.05	< 0.5	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.5	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.5	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.5	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.5	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5	-	-

Client Sample ID			SB19_6.0	[G01]SB23_0.5	SB23_2.0	SB23_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010828	S24-Fe0010829	S24-Fe0010830	S24-Fe0010831
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.5	-	-
Toxaphene	0.5	mg/kg	< 0.5	< 10	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.5	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 1	-	-
Dibutylchlorendate (surr.)	1	%	135	84	-	-
Tetrachloro-m-xylene (surr.)	1	%	110	95	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.5	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.5	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.5	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.5	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.5	-	-
Coumaphos	2	mg/kg	< 2	< 5	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.5	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.5	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.5	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.5	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.5	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.5	-	-
EPN	0.2	mg/kg	< 0.2	< 0.5	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.5	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.5	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.5	-	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.5	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.5	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.5	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.5	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.5	-	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.5	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.5	-	-
Monocrotophos	2	mg/kg	< 2	< 5	-	-
Naled	0.2	mg/kg	< 0.2	< 0.5	-	-
Omethoate	2	mg/kg	< 2	< 5	-	-
Phorate	0.2	mg/kg	< 0.2	< 0.5	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.5	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.5	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.5	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.5	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.5	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.5	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.5	-	-
Triphenylphosphate (surr.)	1	%	124	87	-	-

Client Sample ID			SB19_6.0	[G01]SB23_0.5	SB23_2.0	SB23_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010828	S24-Fe0010829	S24-Fe0010830	S24-Fe0010831
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Nitrophenol	1	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 1	-	-
Total cresols*	0.5	mg/kg	< 0.5	< 1	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	0.8	-	-
Phenol-d6 (surr.)	1	%	109	91	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.3	3.0	36	3.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	9.7	12	6.4
Copper	5	mg/kg	< 5	15	120	290
Lead	5	mg/kg	< 5	37	47	69
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.4	0.3
Nickel	5	mg/kg	< 5	9.4	16	9.3
Zinc	5	mg/kg	37	53	140	180
Sample Properties						
% Moisture	1	%	7.6	14	16	16

Client Sample ID			SB23_5.0	MW124-0.5	MW124-2.0	MW124-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010832	S24-Fe0010833	S24-Fe0010834	S24-Fe0010835
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			SB23_5.0	MW124-0.5	MW124-2.0	MW124-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010832	S24-Fe0010833	S24-Fe0010834	S24-Fe0010835
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	120	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	120	< 100	< 100	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB23_5.0	MW124-0.5	MW124-2.0	MW124-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010832	S24-Fe0010833	S24-Fe0010834	S24-Fe0010835
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	73	98	98	54
Toluene-d8 (surr.)	1	%	61	97	104	61
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	100	91	95	94
p-Terphenyl-d14 (surr.)	1	%	115	122	127	111
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	-	-

Client Sample ID			SB23_5.0	MW124-0.5	MW124-2.0	MW124-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010832	S24-Fe0010833	S24-Fe0010834	S24-Fe0010835
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
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	%	-	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	101	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			SB23_5.0	MW124-0.5	MW124-2.0	MW124-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010832	S24-Fe0010833	S24-Fe0010834	S24-Fe0010835
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	98	-	-
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	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	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	104	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	9.0	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.4	< 0.4
Chromium	5	mg/kg	< 5	6.9	< 5	< 5
Copper	5	mg/kg	< 5	18	9.4	< 5
Lead	5	mg/kg	< 5	510	14	< 5
Mercury	0.1	mg/kg	< 0.1	5.9	0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	100	16	< 5
Sample Properties						
% Moisture	1	%	18	8.8	7.9	18

Client Sample ID			MW124-5.0	SB22_0.5	SB22_2.0	SB22_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010836	S24-Fe0010838	S24-Fe0010839	S24-Fe0010840
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	110	160	540
TRH C29-C36	50	mg/kg	< 50	60	98	350
TRH C10-C36 (Total)	50	mg/kg	< 50	170	258	890
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	150	240	800
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	300
TRH >C10-C40 (total)*	100	mg/kg	< 100	150	240	1100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			MW124-5.0	SB22_0.5	SB22_2.0	SB22_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010836	S24-Fe0010838	S24-Fe0010839	S24-Fe0010840
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	1.4	1.0	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	1.4	1	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	1.4	1	< 0.5
4-Bromofluorobenzene (surr.)	1	%	90	105	100	88
Toluene-d8 (surr.)	1	%	101	79	82	71
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	6.9	22
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	6.9	22
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	6.9	22
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.8
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Anthracene	0.5	mg/kg	< 0.5	< 0.5	0.9	4.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	4.0	12
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	4.9	16
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	3.7	9.4
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	2.1	7.7
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	3.3	8.7
Chrysene	0.5	mg/kg	< 0.5	< 0.5	4.0	14
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	0.6	1.8
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	7.2	25
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	2.4
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	2.1	6.2
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.7
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	2.8	12
Pyrene	0.5	mg/kg	< 0.5	< 0.5	7.4	28
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	43	150
2-Fluorobiphenyl (surr.)	1	%	77	77	82	108
p-Terphenyl-d14 (surr.)	1	%	89	94	104	116

Client Sample ID			MW124-5.0	SB22_0.5	SB22_2.0	SB22_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010836	S24-Fe0010838	S24-Fe0010839	S24-Fe0010840
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
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	-	-
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	%	-	117	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	84	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			MW124-5.0	SB22_0.5	SB22_2.0	SB22_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010836	S24-Fe0010838	S24-Fe0010839	S24-Fe0010840
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	72	-	-
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	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	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	92	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	14	3.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	7.6	11	< 5
Copper	5	mg/kg	< 5	10	65	330
Lead	5	mg/kg	< 5	48	420	47
Mercury	0.1	mg/kg	< 0.1	0.1	0.6	0.2
Nickel	5	mg/kg	< 5	9.2	7.4	11
Zinc	5	mg/kg	< 5	42	240	93
Sample Properties						
% Moisture	1	%	20	8.7	14	14

Client Sample ID			SB22_6.0	SB21_0.5	SB21_2.0	SB21_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010841	S24-Fe0010842	S24-Fe0010843	S24-Fe0010844
Date Sampled			Jan 31, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	520	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	240	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	760	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	680	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	180	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	860	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB22_6.0	SB21_0.5	SB21_2.0	SB21_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010841	S24-Fe0010842	S24-Fe0010843	S24-Fe0010844
Date Sampled			Jan 31, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	89	87	92	97
Toluene-d8 (surr.)	1	%	106	104	103	107
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	21	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	21	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	21	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	1.3	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	7.6	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	14	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	13	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	18	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	8.1	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	19	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	16	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.3	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	34	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	1.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	9.0	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	20	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	38	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	200	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	79	71	90
p-Terphenyl-d14 (surr.)	1	%	115	89	90	125

Client Sample ID			SB22_6.0	SB21_0.5	SB21_2.0	SB21_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010841	S24-Fe0010842	S24-Fe0010843	S24-Fe0010844
Date Sampled			Jan 31, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
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	-	-
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	%	-	92	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	83	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			SB22_6.0	SB21_0.5	SB21_2.0	SB21_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010841	S24-Fe0010842	S24-Fe0010843	S24-Fe0010844
Date Sampled			Jan 31, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	92	-	-
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	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	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	82	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	11	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	32	< 5
Copper	5	mg/kg	< 5	< 5	93	< 5
Lead	5	mg/kg	< 5	< 5	320	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.8	< 0.1
Nickel	5	mg/kg	< 5	< 5	20	< 5
Zinc	5	mg/kg	46	5.5	570	5.5
Sample Properties						
% Moisture	1	%	16	10	14	15

Client Sample ID			SB26_0.5	SB26_2.0	SB26_5.0	SB26_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010845	S24-Fe0010846	S24-Fe0010847	S24-Fe0010848
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	380	< 50	-
TRH C29-C36	50	mg/kg	< 50	230	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	610	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	540	< 100	-
TRH >C34-C40	100	mg/kg	100	140	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	100	680	< 100	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB26_0.5	SB26_2.0	SB26_5.0	SB26_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010845	S24-Fe0010846	S24-Fe0010847	S24-Fe0010848
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	87	92	INT	103
Toluene-d8 (surr.)	1	%	92	100	INT	125
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	21	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	21	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	21	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	2.0	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	12	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	14	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	18	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	7.0	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	18	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	13	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	0.9	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	18	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	8.6	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	4.1	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	21	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	140	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	84	67	89	-
p-Terphenyl-d14 (surr.)	1	%	109	76	125	-

Client Sample ID			SB26_0.5	SB26_2.0	SB26_5.0	SB26_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010845	S24-Fe0010846	S24-Fe0010847	S24-Fe0010848
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
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	-	-	-
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	%	99	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	105	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			SB26_0.5	SB26_2.0	SB26_5.0	SB26_6.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010845	S24-Fe0010846	S24-Fe0010847	S24-Fe0010848
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	140	-	-	-
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	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	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	111	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.8	3.2	< 2	-
Cadmium	0.4	mg/kg	< 0.4	1.1	< 0.4	-
Chromium	5	mg/kg	< 5	8.8	< 5	-
Copper	5	mg/kg	14	140	< 5	-
Lead	5	mg/kg	54	610	< 5	-
Mercury	0.1	mg/kg	< 0.1	0.5	< 0.1	-
Nickel	5	mg/kg	< 5	14	< 5	-
Zinc	5	mg/kg	10.0	500	8.6	-
Sample Properties						
% Moisture	1	%	13	16	17	15

Client Sample ID			SB27_0.5	SB27_2.0	SB27_3.0	SB27_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010849	S24-Fe0010850	S24-Fe0010851	S24-Fe0010852
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	350	< 50	-
TRH C29-C36	50	mg/kg	< 50	210	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	560	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	510	< 100	-
TRH >C34-C40	100	mg/kg	110	140	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	110	650	< 100	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB27_0.5	SB27_2.0	SB27_3.0	SB27_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010849	S24-Fe0010850	S24-Fe0010851	S24-Fe0010852
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	2.7	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	2.7	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	2.7	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	100	102	98	62
Toluene-d8 (surr.)	1	%	106	112	102	68
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	0.6	< 0.5	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	10	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	10	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	10	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	1.2	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	4.6	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	6.6	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	6.7	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	9.7	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	4.0	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	10.0	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	9.4	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	15	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	1.8	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	4.1	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	1.1	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	9.9	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	19	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	100	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	87	66	89	-
p-Terphenyl-d14 (surr.)	1	%	105	79	120	-

Client Sample ID			SB27_0.5	SB27_2.0	SB27_3.0	SB27_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010849	S24-Fe0010850	S24-Fe0010851	S24-Fe0010852
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
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	-	-	-
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	%	103	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			SB27_0.5	SB27_2.0	SB27_3.0	SB27_5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010849	S24-Fe0010850	S24-Fe0010851	S24-Fe0010852
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	108	-	-	-
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	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	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	108	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.1	4.0	< 2	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	< 5	7.0	< 5	-
Copper	5	mg/kg	6.8	140	< 5	-
Lead	5	mg/kg	63	150	14	-
Mercury	0.1	mg/kg	0.3	0.3	< 0.1	-
Nickel	5	mg/kg	7.0	12	< 5	-
Zinc	5	mg/kg	33	150	14	-
Sample Properties						
% Moisture	1	%	14	14	9.4	18

Client Sample ID			SB27_6.0	QC136	QC137	QC138
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010853	S24-Fe0010854	S24-Fe0010855	S24-Fe0010856
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	61	64	< 50
TRH C29-C36	50	mg/kg	-	75	64	< 50
TRH C10-C36 (Total)	50	mg/kg	-	136	128	< 50
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	120	110	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	120	110	< 100
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SB27_6.0	QC136	QC137	QC138
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010853	S24-Fe0010854	S24-Fe0010855	S24-Fe0010856
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
4-Bromofluorobenzene (surr.)	1	%	105	95	92	68
Toluene-d8 (surr.)	1	%	129	104	99	INT
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	1.0	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	1.3	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.5	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	0.7	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	0.7	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	1.0	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	1.1	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	0.8	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	1.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	0.7	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	1.4	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	7.9	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	94	86	102
p-Terphenyl-d14 (surr.)	1	%	-	110	108	124

Client Sample ID			SB27_6.0	QC136	QC137	QC138
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0010853	S24-Fe0010854	S24-Fe0010855	S24-Fe0010856
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	< 2	2.9	< 2
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	< 5	8.1	< 5
Copper	5	mg/kg	-	< 5	36	< 5
Lead	5	mg/kg	-	< 5	140	< 5
Mercury	0.1	mg/kg	-	< 0.1	0.2	< 0.1
Nickel	5	mg/kg	-	< 5	< 5	< 5
Zinc	5	mg/kg	-	16	66	5.8
Sample Properties						
% Moisture	1	%	21	12	9.9	7.1

Client Sample ID			QC139	QC338	QC438	MW124-6.15
Sample Matrix			Soil	Trip Blank (solid)	Trip Spike (solid)	Soil
Eurofins Sample No.			S24-Fe0010857	S24-Fe0010858	S24-Fe0010859	S24-Fe0010962
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 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	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	< 0.5

Client Sample ID			QC139	QC338	QC438	MW124-6.15
Sample Matrix			Soil	Trip Blank (solid)	Trip Spike (solid)	Soil
Eurofins Sample No.			S24-Fe0010857	S24-Fe0010858	S24-Fe0010859	S24-Fe0010962
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromoform	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Chloroform	0.5	mg/kg	< 0.5	-	-	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Styrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	-	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	-	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	INT	-	-	77
Toluene-d8 (surr.)	1	%	INT	-	-	79
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
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	-	-	-

Client Sample ID			QC139	QC338	QC438	MW124-6.15
Sample Matrix			Soil	Trip Blank (solid)	Trip Spike (solid)	Soil
Eurofins Sample No.			S24-Fe0010857	S24-Fe0010858	S24-Fe0010859	S24-Fe0010962
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 02, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	-	-	-
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	%	103	-	-	-
p-Terphenyl-d14 (surr.)	1	%	144	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	-	-
Cadmium	0.4	mg/kg	< 0.4	-	-	-
Chromium	5	mg/kg	< 5	-	-	-
Copper	5	mg/kg	< 5	-	-	-
Lead	5	mg/kg	< 5	-	-	-
Mercury	0.1	mg/kg	< 0.1	-	-	-
Nickel	5	mg/kg	< 5	-	-	-
Zinc	5	mg/kg	5.3	-	-	-
Sample Properties						
% Moisture	1	%	15	-	-	16
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	1	%	-	-	97	-
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	%	-	88	-	-
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	73	-
TRH C6-C9	1	%	-	-	97	-
BTEX						
Benzene	1	%	-	-	100	-
Ethylbenzene	1	%	-	-	93	-
m&p-Xylenes	1	%	-	-	92	-
o-Xylene	1	%	-	-	97	-

Client Sample ID			QC139	QC338	QC438	MW124-6.15
Sample Matrix			**Soil**	**Trip Blank (solid)**	**Trip Spike (solid)**	**Soil**
Eurofins Sample No.			**S24-Fe0010857**	**S24-Fe0010858**	**S24-Fe0010859**	**S24-Fe0010962**
Date Sampled			**Jan 02, 2024**	**Jan 02, 2024**	**Jan 02, 2024**	**Jan 31, 2024**
Test/Reference	LOR	Unit				
BTEX						
Toluene	1	%	-	-	95	-
Xylenes - Total	1	%	-	-	95	-
4-Bromofluorobenzene (surr.)	1	%	-	-	94	-

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	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Feb 09, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Feb 08, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Phenols (Halogenated)	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Feb 08, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Sydney	Feb 07, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	SB20_0.5	Jan 31, 2024		Soil	S24-Fe0010820	X			X	X		X	X		
2	SB20_2.0	Jan 31, 2024		Soil	S24-Fe0010821	X						X	X		
3	SB20_4.0	Jan 31, 2024		Soil	S24-Fe0010822							X	X		
4	SB20_6.0	Jan 31, 2024		Soil	S24-Fe0010823							X	X		
5	SB20_6.1	Jan 31, 2024		Soil	S24-Fe0010824						X	X			
6	SB19_0.2	Jan 31, 2024		Soil	S24-Fe0010825	X			X	X		X	X		
7	SB19_1.0	Jan 31, 2024		Soil	S24-Fe0010826							X	X		
8	SB19_3.0	Jan 31, 2024		Soil	S24-Fe0010827							X	X		
9	SB19_6.0	Jan 31, 2024		Soil	S24-Fe0010828				X	X		X	X		
10	SB23_0.5	Jan 31, 2024		Soil	S24-Fe0010829	X			X	X		X	X		
11	SB23_2.0	Jan 31, 2024		Soil	S24-Fe0010830							X	X		
12	SB23_3.0	Jan 31, 2024		Soil	S24-Fe0010831							X	X		
13	SB23_5.0	Jan 31, 2024		Soil	S24-Fe0010832							X	X		

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Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
14	MW124-0.5	Jan 31, 2024		Soil	S24-Fe0010833	X			X	X		X	X		
15	MW124-2.0	Jan 31, 2024		Soil	S24-Fe0010834							X	X		
16	MW124-3.0	Jan 31, 2024		Soil	S24-Fe0010835							X	X		
17	MW124-5.0	Jan 31, 2024		Soil	S24-Fe0010836							X	X		
18	MW124-6.15	Jan 31, 2024		Soil	S24-Fe0010837		X								
19	SB22_0.5	Jan 31, 2024		Soil	S24-Fe0010838	X			X	X		X	X		
20	SB22_2.0	Jan 31, 2024		Soil	S24-Fe0010839							X	X		
21	SB22_3.0	Jan 31, 2024		Soil	S24-Fe0010840							X	X		
22	SB22_6.0	Jan 31, 2024		Soil	S24-Fe0010841							X	X		
23	SB21_0.5	Jan 02, 2024		Soil	S24-Fe0010842	X			X	X		X	X		
24	SB21_2.0	Jan 02, 2024		Soil	S24-Fe0010843							X	X		
25	SB21_4.0	Jan 02, 2024		Soil	S24-Fe0010844							X	X		
26	SB26_0.5	Jan 02, 2024		Soil	S24-Fe0010845	X			X	X		X	X		
27	SB26_2.0	Jan 02, 2024		Soil	S24-Fe0010846							X	X		
28	SB26_5.0	Jan 02, 2024		Soil	S24-Fe0010847							X	X		
29	SB26_6.0	Jan 02, 2024		Soil	S24-Fe0010848						X	X			

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
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Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
30	SB27_0.5	Jan 02, 2024		Soil	S24-Fe0010849	X			X	X		X	X		
31	SB27_2.0	Jan 02, 2024		Soil	S24-Fe0010850							X	X		
32	SB27_3.0	Jan 02, 2024		Soil	S24-Fe0010851							X	X		
33	SB27_5.0	Jan 02, 2024		Soil	S24-Fe0010852						X	X			
34	SB27_6.0	Jan 02, 2024		Soil	S24-Fe0010853						X	X			
35	QC136	Jan 02, 2024		Soil	S24-Fe0010854							X	X		
36	QC137	Jan 02, 2024		Soil	S24-Fe0010855							X	X		
37	QC138	Jan 02, 2024		Soil	S24-Fe0010856							X	X		
38	QC139	Jan 02, 2024		Soil	S24-Fe0010857							X	X		
39	QC338	Jan 02, 2024		Trip Blank (solid)	S24-Fe0010858									X	
40	QC438	Jan 02, 2024		Trip Spike (solid)	S24-Fe0010859										X
41	SB20_0.2	Jan 31, 2024		Soil	S24-Fe0010861			X							
42	SB20_1.0	Jan 31, 2024		Soil	S24-Fe0010862			X							
43	SB20_3.0	Jan 31, 2024		Soil	S24-Fe0010863			X							

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
44	SB20_5.0	Jan 31, 2024		Soil	S24-Fe0010864			X							
45	SB20_7.0	Jan 31, 2024		Soil	S24-Fe0010865			X							
46	SB19_0.5	Jan 31, 2024		Soil	S24-Fe0010866			X							
47	SB19_1.5	Jan 31, 2024		Soil	S24-Fe0010867			X							
48	SB19_2.0	Jan 31, 2024		Soil	S24-Fe0010868			X							
49	SB19_4.0	Jan 31, 2024		Soil	S24-Fe0010869			X							
50	SB19_5.0	Jan 31, 2024		Soil	S24-Fe0010870			X							
51	SB19_6.5	Jan 31, 2024		Soil	S24-Fe0010871			X							
52	SB19_7.0	Jan 31, 2024		Soil	S24-Fe0010872			X							
53	SB23_0.2	Jan 31, 2024		Soil	S24-Fe0010873			X							
54	SB23_1.0	Jan 31, 2024		Soil	S24-Fe0010874			X							
55	SB23_4.0	Jan 31, 2024		Soil	S24-Fe0010875			X							
56	MW124-0.2	Jan 31, 2024		Soil	S24-Fe0010876			X							
57	MW124-1.0	Jan 31, 2024		Soil	S24-Fe0010877			X							
58	MW124-4.0	Jan 31, 2024		Soil	S24-Fe0010878			X							
59	MW124-6.0	Jan 31, 2024		Soil	S24-Fe0010879			X							

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Order No.: PO021581
Report #: 1065526
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 2, 2024 9:13 PM
Due: Feb 9, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
60	MW124-7.16	Jan 31, 2024		Soil	S24-Fe0010880			X							
61	SB22_0.2	Jan 31, 2024		Soil	S24-Fe0010881			X							
62	SB22_1.0	Jan 31, 2024		Soil	S24-Fe0010882			X							
63	SB22_4.0	Jan 31, 2024		Soil	S24-Fe0010883			X							
64	SB22_5.0	Jan 31, 2024		Soil	S24-Fe0010884			X							
65	SB21_0.2	Jan 02, 2024		Soil	S24-Fe0010885			X							
66	SB21_1.0	Jan 02, 2024		Soil	S24-Fe0010886			X							
67	SB21_3.0	Jan 02, 2024		Soil	S24-Fe0010887			X							
68	SB21_5.0	Jan 02, 2024		Soil	S24-Fe0010888			X							
69	SB26_0.2	Jan 02, 2024		Soil	S24-Fe0010889			X							
70	SB26_1.0	Jan 02, 2024		Soil	S24-Fe0010890			X							
71	SB26_3.0	Jan 02, 2024		Soil	S24-Fe0010891			X							
72	SB26_4.0	Jan 02, 2024		Soil	S24-Fe0010892			X							
73	SB26_7.0	Jan 02, 2024		Soil	S24-Fe0010893			X							
74	SB27_0.2	Jan 02, 2024		Soil	S24-Fe0010894			X							
75	SB27_1.0	Jan 02, 2024		Soil	S24-Fe0010895			X							

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Eurofins Analytical Services Manager : Adam Bateup

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X
76	SB27_4.0	Jan 02, 2024		Soil	S24-Fe0010896			X							
77	SB27_6.5	Jan 02, 2024		Soil	S24-Fe0010897			X							
78	MW124-6.15	Jan 31, 2024		Soil	S24-Fe0010962						X	X			
79	MW124-7.16	Jan 31, 2024		Soil	S24-Fe0010963			X							
80	SB18_0.2	Jan 31, 2024		Soil	S24-Fe0010964			X							
81	SB18_0.5	Jan 31, 2024		Soil	S24-Fe0010965			X							
82	SB18_1.0	Jan 31, 2024		Soil	S24-Fe0010966			X							
Test Counts						9	1	41	9	9	5	38	33	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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	
TRH C6-C10	mg/kg	< 20			20	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							
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	
Benzene	mg/kg	< 0.1			0.1	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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	mg/kg	< 1			1	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	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	-			20	N/A	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Naphthalene	mg/kg	< 0.5			0.5	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	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	95			70-130	Pass	
TRH C10-C14	%	72			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	
TRH >C10-C16	%	71			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	72			70-130	Pass	
1.1.1-Trichloroethane	%	73			70-130	Pass	
1.2-Dichlorobenzene	%	124			70-130	Pass	
1.2-Dichloroethane	%	93			70-130	Pass	
Benzene	%	84			70-130	Pass	
Ethylbenzene	%	107			70-130	Pass	
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	108			70-130	Pass	
Toluene	%	97			70-130	Pass	
Trichloroethene	%	73			70-130	Pass	
Xylenes - Total*	%	102			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	108			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	95			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthylene	%	93			70-130	Pass	
Anthracene	%	98			70-130	Pass	
Benz(a)anthracene	%	82			70-130	Pass	
Benzo(a)pyrene	%	85			70-130	Pass	
Benzo(b&j)fluoranthene	%	82			70-130	Pass	
Benzo(g.h.i)perylene	%	82			70-130	Pass	
Benzo(k)fluoranthene	%	85			70-130	Pass	
Chrysene	%	83			70-130	Pass	
Dibenz(a.h)anthracene	%	82			70-130	Pass	
Fluoranthene	%	94			70-130	Pass	
Fluorene	%	97			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	85			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
Phenanthrene	%	98			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	95			70-130	Pass	
4.4'-DDD	%	89			70-130	Pass	
4.4'-DDE	%	94			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-HCH	%	96			70-130	Pass	
Aldrin	%	90			70-130	Pass	
b-HCH	%	93			70-130	Pass	
d-HCH	%	93			70-130	Pass	
Dieldrin	%	97			70-130	Pass	
Endosulfan I	%	90			70-130	Pass	
Endosulfan II	%	90			70-130	Pass	
Endosulfan sulphate	%	93			70-130	Pass	
Endrin	%	93			70-130	Pass	
Endrin aldehyde	%	87			70-130	Pass	
Endrin ketone	%	89			70-130	Pass	
g-HCH (Lindane)	%	95			70-130	Pass	
Heptachlor	%	97			70-130	Pass	
Heptachlor epoxide	%	88			70-130	Pass	
Hexachlorobenzene	%	96			70-130	Pass	
Methoxychlor	%	80			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	102			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Ethion	%	93			70-130	Pass	
Fenitrothion	%	73			70-130	Pass	
Methyl parathion	%	105			70-130	Pass	
Mevinphos	%	96			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	93			25-140	Pass	
2.4-Dichlorophenol	%	89			25-140	Pass	
2.4.5-Trichlorophenol	%	89			25-140	Pass	
2.4.6-Trichlorophenol	%	82			25-140	Pass	
2.6-Dichlorophenol	%	91			25-140	Pass	
4-Chloro-3-methylphenol	%	92			25-140	Pass	
Pentachlorophenol	%	75			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tetrachlorophenols - Total	%	77			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	82			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	90			25-140	Pass	
2-Nitrophenol	%	88			25-140	Pass	
2.4-Dimethylphenol	%	92			25-140	Pass	
2.4-Dinitrophenol	%	98			25-140	Pass	
2-Methylphenol (o-Cresol)	%	93			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	93			25-140	Pass	
4-Nitrophenol	%	80			25-140	Pass	
Dinoseb	%	91			25-140	Pass	
Phenol	%	94			25-140	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	92			80-120	Pass	
Copper	%	90			80-120	Pass	
Lead	%	87			80-120	Pass	
Mercury	%	113			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	100			80-120	Pass	
LCS - % Recovery							
Naphthalene	%	108			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	91			70-130	Pass	
Toluene	%	101			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	101			70-130	Pass	
o-Xylene	%	109			70-130	Pass	
Xylenes - Total*	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Volatile Organics				Result 1					
1.2-Dichlorobenzene	S24-Fe0001042	NCP	%	79			70-130	Pass	
1.2-Dichloroethane	S24-Fe0001032	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Ethylbenzene	S24-Fe0010821	CP	%	93			70-130	Pass	
m&p-Xylenes	S24-Fe0010821	CP	%	91			70-130	Pass	
o-Xylene	S24-Fe0010821	CP	%	100			70-130	Pass	
Toluene	S24-Fe0010821	CP	%	80			70-130	Pass	
Xylenes - Total*	S24-Fe0010821	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Fe0010821	CP	%	82			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S24-Fe0010825	CP	%	79			70-130	Pass	
Acenaphthylene	S24-Fe0010825	CP	%	81			70-130	Pass	
Anthracene	S24-Fe0010825	CP	%	84			70-130	Pass	
Benz(a)anthracene	S24-Fe0010825	CP	%	83			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(a)pyrene	S24-Fe0010825	CP	%	84			70-130	Pass	
Benzo(b&j)fluoranthene	S24-Fe0010825	CP	%	83			70-130	Pass	
Benzo(g.h.i)perylene	S24-Fe0010825	CP	%	78			70-130	Pass	
Benzo(k)fluoranthene	S24-Fe0010825	CP	%	78			70-130	Pass	
Chrysene	S24-Fe0010825	CP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	S24-Fe0010825	CP	%	80			70-130	Pass	
Fluoranthene	S24-Fe0010825	CP	%	85			70-130	Pass	
Fluorene	S24-Fe0010825	CP	%	82			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S24-Fe0010825	CP	%	79			70-130	Pass	
Naphthalene	S24-Fe0010825	CP	%	82			70-130	Pass	
Phenanthrene	S24-Fe0010825	CP	%	83			70-130	Pass	
Pyrene	S24-Fe0010825	CP	%	85			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-Fe0010825	CP	%	83			70-130	Pass	
4.4'-DDD	S24-Fe0010825	CP	%	87			70-130	Pass	
4.4'-DDE	S24-Fe0010825	CP	%	85			70-130	Pass	
4.4'-DDT	S24-Fe0010825	CP	%	101			70-130	Pass	
a-HCH	S24-Fe0010825	CP	%	81			70-130	Pass	
Aldrin	S24-Fe0010825	CP	%	83			70-130	Pass	
b-HCH	S24-Fe0010825	CP	%	81			70-130	Pass	
d-HCH	S24-Fe0010825	CP	%	81			70-130	Pass	
Dieldrin	S24-Fe0010825	CP	%	85			70-130	Pass	
Endosulfan I	S24-Fe0010825	CP	%	82			70-130	Pass	
Endosulfan II	S24-Fe0010825	CP	%	86			70-130	Pass	
Endosulfan sulphate	S24-Fe0010825	CP	%	92			70-130	Pass	
Endrin	S24-Fe0010825	CP	%	93			70-130	Pass	
Endrin aldehyde	S24-Fe0010825	CP	%	82			70-130	Pass	
Endrin ketone	S24-Fe0010825	CP	%	88			70-130	Pass	
g-HCH (Lindane)	S24-Fe0010825	CP	%	82			70-130	Pass	
Heptachlor	S24-Fe0010825	CP	%	88			70-130	Pass	
Heptachlor epoxide	S24-Fe0010825	CP	%	80			70-130	Pass	
Hexachlorobenzene	S24-Fe0010825	CP	%	82			70-130	Pass	
Methoxychlor	S24-Fe0010825	CP	%	96			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S24-Fe0010825	CP	%	97			70-130	Pass	
Dimethoate	S24-Fe0010825	CP	%	85			70-130	Pass	
Ethion	S24-Fe0010825	CP	%	92			70-130	Pass	
Fenitrothion	S24-Fe0010825	CP	%	70			70-130	Pass	
Methyl parathion	S24-Fe0010825	CP	%	95			70-130	Pass	
Mevinphos	S24-Fe0010825	CP	%	92			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S24-Fe0010825	CP	%	80			30-130	Pass	
2.4-Dichlorophenol	S24-Fe0010825	CP	%	74			30-130	Pass	
4-Chloro-3-methylphenol	S24-Fe0010825	CP	%	81			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S24-Fe0010825	CP	%	72			30-130	Pass	
2.4-Dimethylphenol	S24-Fe0010825	CP	%	71			30-130	Pass	
2-Methylphenol (o-Cresol)	S24-Fe0010825	CP	%	80			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-Fe0010825	CP	%	80			30-130	Pass	
Dinoseb	S24-Fe0010825	CP	%	72			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenol	S24-Fe0010825	CP	%	79			30-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S24-Fe0018920	NCP	%	112			70-130	Pass	
1.1.1-Trichloroethane	S24-Fe0018920	NCP	%	78			70-130	Pass	
Benzene	S24-Fe0018920	NCP	%	83			70-130	Pass	
Trichloroethene	S24-Fe0014491	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Fe0010836	CP	%	77			70-130	Pass	
TRH >C10-C16	S24-Fe0010836	CP	%	73			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Fe0010836	CP	%	88			75-125	Pass	
Cadmium	S24-Fe0010836	CP	%	90			75-125	Pass	
Chromium	S24-Fe0010836	CP	%	83			75-125	Pass	
Copper	S24-Fe0010836	CP	%	81			75-125	Pass	
Lead	S24-Fe0010836	CP	%	80			75-125	Pass	
Mercury	S24-Fe0010836	CP	%	102			75-125	Pass	
Nickel	S24-Fe0010836	CP	%	89			75-125	Pass	
Zinc	S24-Fe0010836	CP	%	90			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-Ja0035600	NCP	%	72			70-130	Pass	
TRH C6-C10	S24-Ja0035600	NCP	%	73			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-Fe0005825	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-Fe0018894	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Dieldrin	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-Fe0018894	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-Fe0018894	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0010820	CP	%	11	10	1.5	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S24-Fe0019751	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S24-Fe0019751	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S24-Fe0019751	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S24-Fe0019751	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	W24-Ja0051981	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	W24-Ja0051981	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	W24-Ja0051981	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	W24-Ja0051981	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	W24-Ja0051981	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	W24-Ja0051981	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	W24-Ja0051981	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	W24-Ja0051981	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	W24-Ja0051981	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	W24-Ja0051981	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	W24-Ja0051981	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	W24-Ja0051981	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	W24-Ja0051981	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	W24-Ja0051981	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	W24-Ja0051981	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	W24-Ja0051981	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	W24-Ja0051981	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	W24-Ja0051981	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0010830	CP	%	16	18	11	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-Fe0010835	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Fe0010835	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Fe0010835	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S24-Fe0010835	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Fe0010835	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-Fe0010835	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0010835	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S24-Fe0010835	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Fe0010835	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S24-Fe0010835	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S24-Fe0010835	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S24-Fe0010835	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Fe0010835	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-Fe0010835	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0010841	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S24-Fe0010841	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Fe0010841	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S24-Fe0010841	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S24-Fe0010841	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S24-Fe0010841	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Fe0010841	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-Fe0010841	CP	mg/kg	46	37	23	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Fe0010846	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-Fe0010846	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S24-Fe0010846	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S24-Fe0010846	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S24-Fe0010846	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S24-Fe0010846	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S24-Fe0010846	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	S24-Fe0010846	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Fe0010846	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0010846	CP	mg/kg	3.2	2.1	40	30%	Fail	Q15
Cadmium	S24-Fe0010846	CP	mg/kg	1.1	0.4	83	30%	Fail	Q15
Chromium	S24-Fe0010846	CP	mg/kg	8.8	6.1	36	30%	Fail	Q15
Copper	S24-Fe0010846	CP	mg/kg	140	90	44	30%	Fail	Q02
Lead	S24-Fe0010846	CP	mg/kg	610	320	62	30%	Fail	Q02
Mercury	S24-Fe0010846	CP	mg/kg	0.5	0.3	67	30%	Fail	Q15
Nickel	S24-Fe0010846	CP	mg/kg	14	6.8	66	30%	Fail	Q15
Zinc	S24-Fe0010846	CP	mg/kg	500	220	79	30%	Fail	Q02
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Fe0010851	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-Fe0010851	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S24-Fe0010851	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Dichlorodifluoromethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S24-Fe0010851	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S24-Fe0010851	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S24-Fe0010851	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S24-Fe0010851	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	S24-Fe0010851	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Fe0010851	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0010851	CP	%	9.4	8.1	14	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0010856	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S24-Fe0010856	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Fe0010856	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S24-Fe0010856	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S24-Fe0010856	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S24-Fe0010856	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Fe0010856	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-Fe0010856	CP	mg/kg	5.8	5.2	11	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Fe0010857	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S24-Fe0010857	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Fe0010857	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S24-Fe0010857	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S24-Fe0010857	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S24-Fe0010857	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Fe0010857	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S24-Fe0010857	CP	mg/kg	5.3	5.9	10	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Fe0010962	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-Fe0010962	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2-Dibromoethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	S24-Fe0010962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S24-Fe0010962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S24-Fe0010962	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	S24-Fe0010962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S24-Fe0010962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	S24-Fe0010962	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Fe0010962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
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
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause
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.

Authorised by:

Adam Bateup	Analytical Services Manager
Maria Tian	Senior Analyst-Organic
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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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FW: Eurofins Test Results - Report 1065526 : Site LAWRENCE DRYCLEANERS STAGE 2 SB'S (S19142)

Adam Bateup <AdamBateup@eurofins.com>

Tue 2024-02-13 1:30 PM

To:#AU25_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>
Cc:Ursula Long <UrsulaLong@eurofins.com>

INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

Updated 2-day TAT additional request, I've unflagged & untagged the original request.

Kind Regards,

Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: adambateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487
Website: www.eurofins.com.au/environmental-testing

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From: Matt Beasley <Matt.Beasley@senversa.com.au>
Sent: Tuesday, February 13, 2024 1:27 PM
To: Adam Bateup <AdamBateup@eurofins.com>; Ursula Long <UrsulaLong@eurofins.com>
Subject: FW: Eurofins Test Results - Report 1065526 : Site LAWRENCE DRYCLEANERS STAGE 2 SB'S (S19142)

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

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Hi Adam,

Apologies, a couple of updates in red below and I have removed the request for SB18. I had also mislabelled one of them SB25, which has been updated to SB21.

Regards

senversa

Matt Beasley
Senior Associate Environmental Scientist
M: +61 421 430 097
www.senversa.com.au
144 Parry Street,
Awabakal Country,

Newcastle West, NSW, 2302, Australia

From: Matt Beasley
Sent: Tuesday, February 13, 2024 11:01 AM
To: AdamBateup@eurofins.com; UrsulaLong@eurofins.com
Cc: Bec Chapple <bec.chapple@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: RE: Eurofins Test Results - Report 1065526 : Site LAWRENCE DRYCLEANERS STAGE 2 SB'S (S19142)

Hi Adam,

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- HALVOL analysis for the following soil samples.
  - SB22_0.2
  - SB22_1.0
  - SB23_0.2
  - SB23_1.0
  - SB27_0.2
  - SB27_1.0
  - SB19_0.5
  - SB21_1.0
  - SB20_1.0
  - SB26_0.2
  - SB26_1.0
- ASLP Zero headspace DI HALVOL for:
  - SB23_0.5

Regards

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Senior Associate Environmental Scientist
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144 Parry Street,
Awabakal Country,
Newcastle West, NSW, 2302, Australia

From: AdamBateup@eurofins.com <AdamBateup@eurofins.com>
Sent: Monday, February 12, 2024 5:08 PM
To: Matt Beasley <Matt.Beasley@senversa.com.au>
Cc: Bec Chapple <bec.chapple@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: Eurofins Test Results - Report 1065526 : Site LAWRENCE DRYCLEANERS STAGE 2 SB'S (S19142)

Please find the attached reports

Kind regards,
Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

Eurofins Environment Testing Australia Pty Ltd
179 Magowar Road
Girraween, NSW, 2145

Email: AdamBateup@eurofins.com
I've updated my phone number, please contact me via 0447 584 487

Website: www.eurofins.com/environmental-testing
View our latest EnviroNotes

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Adam Bateup
Analytical Services Manager
My hours are 9 am - 5 pm

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Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
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+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID:	ADDITIONAL: S19142
Turnaround time:	2 Day
Date/Time received	Feb 13, 2024 1:30 PM
Eurofins reference	1068149

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:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

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Site# 1254

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Grovedale
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+61 3 8564 5000
NATA# 1261
Site# 25403

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NATA# 1261
Site# 18217

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NATA# 1261
Site# 20794

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Mayfield West
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NATA# 1261
Site# 25079 & 25289

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NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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IANZ# 1327

Auckland (Asb)
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Mount Wellington,
Auckland 1061
+64 9 525 0568
IANZ# 1308

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43 Detroit Drive
Rolleston,
Christchurch 7675
+64 3 343 5201
IANZ# 1290

Tauranga
1277 Cameron Road,
Gate Pa,
Tauranga 3112
+64 9 525 0568
IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1068149
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 13, 2024 1:30 PM
Due: Feb 15, 2024
Priority: 2 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	SB22_0.2	Jan 31, 2024		Soil	S24-Fe0031615		X	X
2	SB22_1.0	Jan 31, 2024		Soil	S24-Fe0031616		X	X
3	SB23_0.2	Jan 31, 2024		Soil	S24-Fe0031617		X	X
4	SB23_1.0	Jan 31, 2024		Soil	S24-Fe0031618		X	X
5	SB27_0.2	Jan 02, 2024		Soil	S24-Fe0031619		X	X
6	SB27_1.0	Jan 02, 2024		Soil	S24-Fe0031620		X	X
7	SB19_0.5	Jan 31, 2024		Soil	S24-Fe0031621		X	X
8	SB21_1.0	Jan 02, 2024		Soil	S24-Fe0031622		X	X
9	SB20_1.0	Jan 31, 2024		Soil	S24-Fe0031623		X	X
10	SB26_0.2	Jan 02, 2024		Soil	S24-Fe0031624		X	X
11	SB26_1.0	Jan 02, 2024		Soil	S24-Fe0031625		X	X
12	SB23_0.5	Jan 31, 2024		AUS Leachate - Reagent Water	S24-Fe0031626	X	X	

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1068149
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 13, 2024 1:30 PM
Due: Feb 15, 2024
Priority: 2 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X
Test Counts	1	12	11

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1068149-L**
Project name ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID ADDITIONAL: S19142
Received Date Feb 13, 2024

Client Sample ID			**SB23_0.5**
Sample Matrix			**AUS Leachate - Reagent Water**
Eurofins Sample No.			**S24-Fe0031626**
Date Sampled			**Jan 31, 2024**
Test/Reference	LOR	Unit	
Halogenated Volatile Organics			
1.1-Dichloroethane	0.02	mg/L	< 0.02
1.1-Dichloroethene	0.02	mg/L	< 0.02
1.1.1-Trichloroethane	0.02	mg/L	< 0.02
1.1.1.2-Tetrachloroethane	0.02	mg/L	< 0.02
1.1.2-Trichloroethane	0.02	mg/L	< 0.02
1.1.2.2-Tetrachloroethane	0.005	mg/L	< 0.01
1.2-Dibromoethane	0.02	mg/L	< 0.02
1.2-Dichlorobenzene	0.02	mg/L	< 0.02
1.2-Dichloroethane	0.02	mg/L	< 0.02
1.2-Dichloropropane	0.02	mg/L	< 0.02
1.2.3-Trichloropropane	0.02	mg/L	< 0.02
1.3-Dichlorobenzene	0.02	mg/L	< 0.02
1.3-Dichloropropane	0.02	mg/L	< 0.02
1.4-Dichlorobenzene	0.02	mg/L	< 0.02
Bromodichloromethane	0.02	mg/L	< 0.02
Bromoform	0.02	mg/L	< 0.02
Bromomethane	0.02	mg/L	< 0.02
Carbon Tetrachloride	0.005	mg/L	< 0.01
Chlorobenzene	0.02	mg/L	< 0.02
Chloroform	0.02	mg/L	< 0.05
Chloromethane	0.02	mg/L	< 0.02
cis-1.2-Dichloroethene	0.02	mg/L	< 0.02
cis-1.3-Dichloropropene	0.02	mg/L	< 0.02
Dibromochloromethane	0.02	mg/L	< 0.02
Dibromomethane	0.005	mg/L	< 0.01
Iodomethane	0.02	mg/L	< 0.02
Methylene Chloride	0.02	mg/L	< 0.1
Tetrachloroethene	0.02	mg/L	0.02
trans-1.2-Dichloroethene	0.02	mg/L	< 0.02
trans-1.3-Dichloropropene	0.02	mg/L	< 0.02
Trichloroethene	0.02	mg/L	< 0.02
Trichlorofluoromethane	0.02	mg/L	< 0.02
Vinyl chloride	0.02	mg/L	< 0.02
Vic EPA IWRG 621 CHC (Total)*	0.02	mg/L	< 0.1

Client Sample ID			SB23_0.5
Sample Matrix			AUS Leachate - Reagent Water
Eurofins Sample No.			S24-Fe0031626
Date Sampled			Jan 31, 2024
Test/Reference	LOR	Unit	
Halogenated Volatile Organics			
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.1
Toluene-d8 (surr.)	0.02	%	89
AUS Leaching Procedure - ZHE			
Leachate Fluid		comment	4.0
pH (AUS ZHE - off)	0.1	pH Units	10
pH (Leachate Fluid)	0.1	pH Units	7.1

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
Halogenated Volatile Organics	Sydney	Feb 19, 2024	7 Days

- Method: LTM-ORG-2150 VOCs by Purge Trap GCMS

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Eurofins Environment Testing Australia Pty Ltd
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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
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Order No.:
Report #: 1068149
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 13, 2024 1:30 PM
Due: Feb 15, 2024
Priority: 2 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	SB22_0.2	Jan 31, 2024		Soil	S24-Fe0031615		X	X
2	SB22_1.0	Jan 31, 2024		Soil	S24-Fe0031616		X	X
3	SB23_0.2	Jan 31, 2024		Soil	S24-Fe0031617		X	X
4	SB23_1.0	Jan 31, 2024		Soil	S24-Fe0031618		X	X
5	SB27_0.2	Jan 02, 2024		Soil	S24-Fe0031619		X	X
6	SB27_1.0	Jan 02, 2024		Soil	S24-Fe0031620		X	X
7	SB19_0.5	Jan 31, 2024		Soil	S24-Fe0031621		X	X
8	SB21_1.0	Jan 02, 2024		Soil	S24-Fe0031622		X	X
9	SB20_1.0	Jan 31, 2024		Soil	S24-Fe0031623		X	X
10	SB26_0.2	Jan 02, 2024		Soil	S24-Fe0031624		X	X
11	SB26_1.0	Jan 02, 2024		Soil	S24-Fe0031625		X	X
12	SB23_0.5	Jan 31, 2024		AUS Leachate - Reagent Water	S24-Fe0031626	X	X	

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Received: Feb 13, 2024 1:30 PM
Due: Feb 15, 2024
Priority: 2 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X
Test Counts	1	12	11

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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

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

Authorised by:

Adam Bateup	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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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Attention: **Matt Beasley**

Report **1068149-S**
Project name ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID ADDITIONAL: S19142
Received Date Feb 13, 2024

Client Sample ID			**SB22_0.2**	**SB22_1.0**	**SB23_0.2**	**SB23_1.0**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-Fe0031615**	**S24-Fe0031616**	**S24-Fe0031617**	**S24-Fe0031618**
Date Sampled			**Jan 31, 2024**	**Jan 31, 2024**	**Jan 31, 2024**	**Jan 31, 2024**
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	17	15
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	17.5	15
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	17.5	15
Toluene-d8 (surr.)	1	%	84	INT	INT	85

Client Sample ID			SB22_0.2	SB22_1.0	SB23_0.2	SB23_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0031615	S24-Fe0031616	S24-Fe0031617	S24-Fe0031618
Date Sampled			Jan 31, 2024	Jan 31, 2024	Jan 31, 2024	Jan 31, 2024
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	14	8.5	5.1	10

Client Sample ID			SB27_0.2	SB27_1.0	SB19_0.5	SB21_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0031619	S24-Fe0031620	S24-Fe0031621	S24-Fe0031622
Date Sampled			Jan 02, 2024	Jan 02, 2024	Jan 31, 2024	Jan 02, 2024
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Toluene-d8 (surr.)	1	%	82	96	99	INT
Sample Properties						
% Moisture	1	%	7.0	11	13	13

Client Sample ID			SB20_1.0	SB26_0.2	SB26_1.0
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S24-Fe0031623	S24-Fe0031624	S24-Fe0031625
Date Sampled			Jan 31, 2024	Jan 02, 2024	Jan 02, 2024
Test/Reference	LOR	Unit			
Halogenated Volatile Organics					
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Toluene-d8 (surr.)	1	%	51	74	88
Sample Properties					
% Moisture	1	%	12	9.4	9.3

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
Halogenated Volatile Organics	Sydney	Feb 13, 2024	7 Days
- Method: LTM-ORG-2150 VOCs by Purge Trap GCMS			
% Moisture	Sydney	Feb 13, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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Order No.:
Report #: 1068149
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 13, 2024 1:30 PM
Due: Feb 15, 2024
Priority: 2 Day
Contact Name: Matt Beasley

Project Name: ADDITIONAL: LAWRENCE DRYCLEANERS STAGE 2 SB'S
Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	SB22_0.2	Jan 31, 2024		Soil	S24-Fe0031615		X	X
2	SB22_1.0	Jan 31, 2024		Soil	S24-Fe0031616		X	X
3	SB23_0.2	Jan 31, 2024		Soil	S24-Fe0031617		X	X
4	SB23_1.0	Jan 31, 2024		Soil	S24-Fe0031618		X	X
5	SB27_0.2	Jan 02, 2024		Soil	S24-Fe0031619		X	X
6	SB27_1.0	Jan 02, 2024		Soil	S24-Fe0031620		X	X
7	SB19_0.5	Jan 31, 2024		Soil	S24-Fe0031621		X	X
8	SB21_1.0	Jan 02, 2024		Soil	S24-Fe0031622		X	X
9	SB20_1.0	Jan 31, 2024		Soil	S24-Fe0031623		X	X
10	SB26_0.2	Jan 02, 2024		Soil	S24-Fe0031624		X	X
11	SB26_1.0	Jan 02, 2024		Soil	S24-Fe0031625		X	X
12	SB23_0.5	Jan 31, 2024		AUS Leachate - Reagent Water	S24-Fe0031626	X	X	

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Project ID: ADDITIONAL: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail	AUS Leaching Procedure - ZHE	Halogenated Volatile Organics	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X
Test Counts	1	12	11

eurofins | Environment Testing

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
Halogenated 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	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	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 Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	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	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	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	
LCS - % Recovery							
Halogenated Volatile Organics							
1.1-Dichloroethene	%	84			70-130	Pass	
1.1.1-Trichloroethane	%	75			70-130	Pass	
1.2-Dichlorobenzene	%	111			70-130	Pass	
1.2-Dichloroethane	%	103			70-130	Pass	
Trichloroethene	%	87			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Halogenated Volatile Organics				Result 1					
1.1-Dichloroethene	S24-Fe0014705	NCP	%	96			70-130	Pass	
1.1.1-Trichloroethane	S24-Fe0014705	NCP	%	109			70-130	Pass	
1.2-Dichlorobenzene	S24-Fe0014705	NCP	%	108			70-130	Pass	
1.2-Dichloroethane	S24-Fe0007608	NCP	%	108			70-130	Pass	
Trichloroethene	S24-Fe0014705	NCP	%	111			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Halogenated Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S24-Fe0031622	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Fe0031622	CP	%	13	12	10	30%	Pass	

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

Authorised by:

Adam Bateup	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile

Glenn Jackson
Managing Director

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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Chain of Custody Documentation

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Laboratory: ALS NSW
Address:
Contact: Sample Receipt
Phone:

Job Number:	S19142	**Purchase Order:**	
Project Name:	Lawrence drycleaners MW124	**Quote No:**	230515Senn-1
Sampled By:	Matt Linz	**Turn Around Time:**	Standard
Project Manager:	MB	**Page:**	1 of 1
Email Report To:	Matt.Beasley@senversa.com.au Matthew.linz@senversa.com Bec.chapple@senversa.com.au	**Phone/Mobile:**	435895069

Sample Information					Container Information		Analysis Required											
Lab ID	**Sample ID**	**Matrix ***	**Date**	**Time**	**Type / Code**	**Total Bottles**	TRH	metals	PAHs	VOC's	Btexn							**Comments**: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	MW124	Water	2/16/2024	9:17	bottles	5	x	x	x	x x								TB
	QC344	Water	2/16/2024	10:17	vial	1				x								TS
	QC444	Water	2/16/2024	11:17	vial	1					x							B10A = 8 metals, TRH, BTEX
																		TB
																		TS
Total						1												

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: Matthew Linz **Signature:** **Date:** 2/16/2024

Relinquished By: Matthew Linz		**Method of Shipment (if applicable):**	**Received by:**	
Name/Signature:	2/16/2024	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time: 7:58	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

1069900

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Eurofins Environment Testing Australia Pty Ltd

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	LAWRENCE DYCLEANERS MW124
Project ID:	S19142
Turnaround time:	5 Day
Date/Time received	Feb 16, 2024 2:40 PM
Eurofins reference	1069900

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.
✗	Split sample sent to requested external lab.
✗	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:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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ABN: 50 005 085 521

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1069900
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Feb 16, 2024 2:40 PM
Due: Feb 23, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DYCLEANERS MW124
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	MW124	Feb 16, 2024		Water	S24-Fe0045002	X		
2	QC344 TB	Feb 16, 2024		Water	S24-Fe0045003		X	
3	QC444 TS	Feb 16, 2024		Water	S24-Fe0045004			X
Test Counts						1	1	1

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1069900-W**
Project name LAWRENCE DYCLEANERS MW124
Project ID S19142
Received Date Feb 16, 2024

Client Sample ID			**MW124**	**QC344 TB**	**QC444 TS**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S24-Fe0045002**	**S24-Fe0045003**	**S24-Fe0045004**
Date Sampled			**Feb 16, 2024**	**Feb 16, 2024**	**Feb 16, 2024**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
2-Butanone (MEK)	0.005	mg/L	< 0.005	-	-
2-Propanone (Acetone)	0.005	mg/L	< 0.005	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	-	-
Allyl chloride	0.001	mg/L	< 0.001	-	-
Benzene	0.001	mg/L	< 0.001	-	-

Client Sample ID			MW124	QC344 TB	QC444 TS
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S24-Fe0045002	S24-Fe0045003	S24-Fe0045004
Date Sampled			Feb 16, 2024	Feb 16, 2024	Feb 16, 2024
Test/Reference	LOR	Unit			
Volatile Organics					
Bromobenzene	0.001	mg/L	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	-	-
Bromoform	0.001	mg/L	< 0.001	-	-
Bromomethane	0.005	mg/L	< 0.005	-	-
Carbon disulfide	0.001	mg/L	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	-	-
Chloroethane	0.005	mg/L	< 0.005	-	-
Chloroform	0.005	mg/L	< 0.005	-	-
Chloromethane	0.005	mg/L	< 0.005	-	-
cis-1.2-Dichloroethene	0.001	mg/L	0.002	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	-	-
Dibromomethane	0.001	mg/L	< 0.001	-	-
Dichlorodifluoromethane	0.005	mg/L	< 0.005	-	-
Ethylbenzene	0.001	mg/L	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	-
Methylene Chloride	0.005	mg/L	< 0.005	-	-
o-Xylene	0.001	mg/L	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	-	-
Trichlorofluoromethane	0.005	mg/L	< 0.005	-	-
Vinyl chloride	0.005	mg/L	< 0.005	-	-
Xylenes - Total*	0.003	mg/L	< 0.003	-	-
Total MAH*	0.003	mg/L	< 0.003	-	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	-	-
4-Bromofluorobenzene (surr.)	1	%	82	-	-
Toluene-d8 (surr.)	1	%	80	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-

Client Sample ID			MW124	QC344 TB	QC444 TS
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S24-Fe0045002	S24-Fe0045003	S24-Fe0045004
Date Sampled			Feb 16, 2024	Feb 16, 2024	Feb 16, 2024
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	67	-	-
p-Terphenyl-d14 (surr.)	1	%	116	-	-
Heavy Metals					
Arsenic	0.001	mg/L	0.007	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-
Chromium	0.001	mg/L	0.001	-	-
Copper	0.001	mg/L	< 0.001	-	-
Lead	0.001	mg/L	< 0.001	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.001	mg/L	< 0.001	-	-
Zinc	0.005	mg/L	0.009	-	-
Naphthalene[N02]	0.01	mg/L	-	< 0.01	-
TRH C6-C10	1	%	-	-	83
BTEX					
Benzene	0.001	mg/L	-	< 0.001	-
Toluene	0.001	mg/L	-	< 0.001	-
Ethylbenzene	0.001	mg/L	-	< 0.001	-
m&p-Xylenes	0.002	mg/L	-	< 0.002	-
o-Xylene	0.001	mg/L	-	< 0.001	-
Xylenes - Total*	0.003	mg/L	-	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	-	83	-
Total Recoverable Hydrocarbons					
Naphthalene	1	%	-	-	100
TRH C6-C9	1	%	-	-	85
BTEX					
Benzene	1	%	-	-	100
Ethylbenzene	1	%	-	-	98
m&p-Xylenes	1	%	-	-	100
o-Xylene	1	%	-	-	100
Toluene	1	%	-	-	130
Xylenes - Total	1	%	-	-	100
4-Bromofluorobenzene (surr.)	1	%	-	-	88

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	Sydney	Feb 23, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 19, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Feb 19, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Feb 19, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 23, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Feb 23, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Feb 23, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Feb 23, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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ABN: 50 005 085 521

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Received: Feb 16, 2024 2:40 PM
Due: Feb 23, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DYCLEANERS MW124
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Eurofins Suite B8	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	MW124	Feb 16, 2024		Water	S24-Fe0045002	X		
2	QC344 TB	Feb 16, 2024		Water	S24-Fe0045003		X	
3	QC444 TS	Feb 16, 2024		Water	S24-Fe0045004			X
Test Counts						1	1	1

eurofins | Environment Testing

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	104			70-130	Pass	
TRH C10-C14	%	112			70-130	Pass	
TRH C6-C10	%	105			70-130	Pass	
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	87			70-130	Pass	
1.1.1-Trichloroethane	%	80			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.2-Dichlorobenzene	%	120			70-130	Pass	
1.2-Dichloroethane	%	98			70-130	Pass	
Benzene	%	88			70-130	Pass	
Ethylbenzene	%	102			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
o-Xylene	%	107			70-130	Pass	
Toluene	%	95			70-130	Pass	
Trichloroethene	%	83			70-130	Pass	
Xylenes - Total*	%	108			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	112			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	
Anthracene	%	123			70-130	Pass	
Benz(a)anthracene	%	99			70-130	Pass	
Benzo(a)pyrene	%	111			70-130	Pass	
Benzo(b&j)fluoranthene	%	102			70-130	Pass	
Benzo(g.h.i)perylene	%	103			70-130	Pass	
Benzo(k)fluoranthene	%	117			70-130	Pass	
Chrysene	%	95			70-130	Pass	
Dibenz(a.h)anthracene	%	99			70-130	Pass	
Fluoranthene	%	116			70-130	Pass	
Fluorene	%	109			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	101			70-130	Pass	
Naphthalene	%	88			70-130	Pass	
Phenanthrene	%	106			70-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	93			80-120	Pass	
Cadmium	%	89			80-120	Pass	
Chromium	%	89			80-120	Pass	
Copper	%	86			80-120	Pass	
Lead	%	86			80-120	Pass	
Mercury	%	93			80-120	Pass	
Nickel	%	89			80-120	Pass	
Zinc	%	88			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Fe0044935	NCP	%	108			70-130	Pass	
TRH >C10-C16	S24-Fe0044935	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S24-Fe0055293	NCP	%	89			70-130	Pass	
1.1.1-Trichloroethane	S24-Fe0055293	NCP	%	79			70-130	Pass	
1.2-Dichlorobenzene	S24-Fe0055293	NCP	%	114			70-130	Pass	
1.2-Dichloroethane	S24-Fe0055293	NCP	%	99			70-130	Pass	
Benzene	S24-Fe0055293	NCP	%	87			70-130	Pass	
Ethylbenzene	S24-Fe0055293	NCP	%	99			70-130	Pass	
m&p-Xylenes	S24-Fe0055293	NCP	%	105			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S24-Fe0055293	NCP	%	103			70-130	Pass	
Toluene	S24-Fe0055293	NCP	%	91			70-130	Pass	
Trichloroethene	S24-Fe0055293	NCP	%	82			70-130	Pass	
Xylenes - Total*	S24-Fe0055293	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Fe0055293	NCP	%	108			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Fe0045002	CP	%	91			75-125	Pass	
Cadmium	S24-Fe0045002	CP	%	86			75-125	Pass	
Chromium	S24-Fe0045002	CP	%	86			75-125	Pass	
Copper	S24-Fe0045002	CP	%	84			75-125	Pass	
Lead	S24-Fe0045002	CP	%	82			75-125	Pass	
Mercury	S24-Fe0045002	CP	%	88			75-125	Pass	
Nickel	S24-Fe0045002	CP	%	86			75-125	Pass	
Zinc	S24-Fe0045002	CP	%	85			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	R24-Fe0044620	NCP	%	78			70-130	Pass	
TRH C6-C10	R24-Fe0044620	NCP	%	78			70-130	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	S24-Fe0050030	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S24-Fe0044934	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S24-Fe0044934	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S24-Fe0044934	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C6-C10	S24-Fe0050030	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S24-Fe0044934	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S24-Fe0044934	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S24-Fe0044934	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Allyl chloride	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloroform	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-Fe0050030	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S24-Fe0050030	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S24-Fe0050030	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Xylenes - Total*	S24-Fe0050030	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Fe0050030	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	R24-Fe0044409	NCP	mg/L	0.003	0.003	17	30%	Pass	
Cadmium	R24-Fe0044409	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	R24-Fe0044409	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	R24-Fe0044409	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	R24-Fe0044409	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	R24-Fe0044409	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	R24-Fe0044409	NCP	mg/L	0.003	0.002	6.5	30%	Pass	
Zinc	R24-Fe0044409	NCP	mg/L	< 0.005	0.007	74	30%	Fail	Q15

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

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
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.

Authorised by:

Adam Bateup	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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.

CERTIFICATE OF ANALYSIS

Work Order	: **ES2329547**	Page	: 1 of 8
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Khaleda Ataei
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: + 61 2 8784 8555
Project	: S19142 LDC Remediation	Date Samples Received	: 31-Aug-2023 08:42
Order number	: ----	Date Analysis Commenced	: 06-Sep-2023
C-O-C number	: ----	Issue Date	: 11-Sep-2023 16:12
Sampler	: BC and ST		
Site	: ----		
Quote number	: EN/103/21		
No. of samples received	: 3		
No. of samples analysed	: 3		

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
- 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW

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 Contract 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.

- 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.
- EP080: 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, 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC205	QC204	QC206	----	----
			Sampling date / time	28-Aug-2023 00:00	28-Aug-2023 00:00	28-Aug-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2329547-001	ES2329547-002	ES2329547-003	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**4.0**	**4.3**	**6.9**	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	**5**	**----**	**----**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	**----**	**----**
Chromium	7440-47-3	2	mg/kg	**5**	<2	<2	**----**	**----**
Copper	7440-50-8	5	mg/kg	**9**	**6**	<5	**----**	**----**
Lead	7439-92-1	5	mg/kg	**54**	**102**	**21**	**----**	**----**
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	**----**	**----**
Zinc	7440-66-6	5	mg/kg	**80**	**32**	**9**	**----**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.4**	<0.1	<0.1	**----**	**----**
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	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	**----**	**----**
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	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC205	QC204	QC206	----	----
				Sampling date / time	28-Aug-2023 00:00	28-Aug-2023 00:00	28-Aug-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2329547-001	ES2329547-002	ES2329547-003	--------	--------
					Result	Result	Result	----	----
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	----	----
Hexachlorobutadiene	87-68-3	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	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC205	QC204	QC206	----	----
				Sampling date / time	28-Aug-2023 00:00	28-Aug-2023 00:00	28-Aug-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2329547-001	ES2329547-002	ES2329547-003	--------	--------
					Result	Result	Result	----	----
EP074F: Halogenated Aromatic Compounds - Continued									
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	----	----
1.2.4-Trichlorobenzene	120-82-1	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)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**	----	----
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	<100	<100	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC205	QC204	QC206	----	----
				Sampling date / time	28-Aug-2023 00:00	28-Aug-2023 00:00	28-Aug-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2329547-001	ES2329547-002	ES2329547-003	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons - Continued									
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	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**94.8**	**102**	**104**	----	----
Toluene-D8	2037-26-5	0.5	%		**106**	**102**	**103**	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**105**	**102**	**102**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**91.5**	**99.0**	**78.7**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**85.3**	**90.5**	**71.8**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**69.7**	**74.9**	**62.2**	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**91.8**	**97.6**	**76.7**	----	----
Anthracene-d10	1719-06-8	0.5	%		**105**	**113**	**90.2**	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**101**	**104**	**81.6**	----	----
EP080S: TPH(V)/BTEX Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC205	QC204	QC206	----	----
				Sampling date / time	28-Aug-2023 00:00	28-Aug-2023 00:00	28-Aug-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2329547-001	ES2329547-002	ES2329547-003	--------	--------
					Result	Result	Result	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**109**	**117**	**120**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**97.8**	**93.6**	**95.2**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**105**	**100**	**100**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2329547**	Page	: 1 of 11
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Khaleda Ataei
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: + 61 2 8784 8555
Project	: S19142 LDC Remediation	Date Samples Received	: 31-Aug-2023
Order number	: ----	Date Analysis Commenced	: 06-Sep-2023
C-O-C number	: ----	Issue Date	: 11-Sep-2023
Sampler	: BC and ST		
Site	: ----		
Quote number	: EN/103/21		
No. of samples received	: 3		
No. of samples analysed	: 3		

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW

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: 5285388)									
ES2329547-001	QC205	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	5	5	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	9	8	15.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	54	89	47.9	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	80	50	46.2	0% - 50%
ES2329744-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	26	25	4.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	29	27	6.3	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	31	30	3.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	13	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	65	61	5.6	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5285394)									
ES2329547-003	QC206	EA055: Moisture Content	----	0.1	%	6.9	6.6	4.5	No Limit
ES2330574-001	Anonymous	EA055: Moisture Content	----	0.1	%	11.3	10.9	3.8	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5285389)									
ES2329547-001	QC205	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.4	0.4	0.0	No Limit
ES2329744-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5281303)									
ES2329890-001	Anonymous	EP074: Styrene	100-42-5	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

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: 5281303) - continued									
ES2329890-001	Anonymous	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: 5281303)									
ES2329890-001	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: 5281303)									
ES2329890-001	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5281303)									
ES2329890-001	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: 5281303)									
ES2329890-001	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

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: 5281303) - continued									
ES2329890-001	Anonymous	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: Hexachlorobutadiene	87-68-3	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: 5281303)									
ES2329890-001	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: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	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: 5281303)									
ES2329890-001	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: 5279774)									
ES2329547-001	QC205	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

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: 5279774) - continued									
ES2329547-001	QC205	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2329888-001	Anonymous	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5279775)									
ES2329547-001	QC205	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
ES2329888-001	Anonymous	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5281304)									
ES2329890-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5279775)									
ES2329547-001	QC205	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
ES2329888-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5279775) - continued									
ES2329888-001	Anonymous	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5281304)									
ES2329890-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5281304)									
ES2329890-001	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

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: 5285388)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	91.6	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	79.2	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	91.2	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	95.0	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	87.9	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	86.2	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	83.2	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5285389)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	87.4	70.0	125
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5281303)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	98.9	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	98.0	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	97.7	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	98.5	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	96.9	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	97.8	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	98.5	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	97.7	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	97.2	59.0	125
EP074B: Oxygenated Compounds (QCLot: 5281303)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	104	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	88.4	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	102	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	91.8	54.0	136
EP074C: Sulfonated Compounds (QCLot: 5281303)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	97.4	54.0	126
EP074D: Fumigants (QCLot: 5281303)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	99.1	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	101	51.0	119

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
EP074D: Fumigants (QCLot: 5281303) - continued								
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	102	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	101	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 5281303)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	87.9	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	95.3	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	94.3	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	96.5	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	98.2	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	96.8	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	100	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	87.6	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	98.0	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	100	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	101	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	98.4	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	97.8	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	104	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	99.8	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	99.0	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	100	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	96.6	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	100	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	96.3	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	102	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	101	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	101	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	104	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 5281303)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	99.5	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	100.0	70.0	114

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
EP074F: Halogenated Aromatic Compounds (QCLot: 5281303) - continued								
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	98.2	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	98.9	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	98.8	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	98.6	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	101	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	105	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	106	52.0	122
EP074G: Trihalomethanes (QCLot: 5281303)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	101	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	100	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	97.0	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	100	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5279774)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	83.8	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	80.7	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	83.8	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	81.4	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	86.5	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	87.5	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	87.8	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	90.4	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	79.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	86.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	82.1	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	99.6	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	83.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	80.3	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	78.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	81.3	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5279775)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	83.0	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	108	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	107	71.0	129

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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5281304)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	93.6	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5279775)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	112	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	106	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	86.7	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5281304)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	96.8	72.4	133
EP080: BTEXN (QCLot: 5281304)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	109	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	109	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	109	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	104	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	103	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	103	78.8	122

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: 5285388)							
ES2329547-001	QC205	EG005T: Arsenic	7440-38-2	50 mg/kg	113	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	106	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	102	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	109	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	109	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	106	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	100	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5285389)							
ES2329547-001	QC205	EG035T: Mercury	7439-97-6	5 mg/kg	106	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5281303)							
ES2329890-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	94.3	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	104	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*
EP074F: Halogenated Aromatic Compounds (QCLot: 5281303)							
ES2329890-001	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	99.8	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5279774)							
ES2329888-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	81.4	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.6	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5279775)							
ES2329888-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	90.5	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	86.4	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	93.2	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5281304)							
ES2329890-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	90.8	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5279775)							
ES2329888-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	94.0	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	92.1	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	70.4	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5281304)							
ES2329890-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	93.3	61.1	142
EP080: BTEXN (QCLot: 5281304)							
ES2329890-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	113	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	101	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	107	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	108	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	108	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	93.1	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2329547**	Page	: 1 of 6
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Telephone	: + 61 2 8784 8555
Project	: S19142 LDC Remediation	Date Samples Received	: 31-Aug-2023
Site	: ----	Issue Date	: 11-Sep-2023
Sampler	: BC and ST	No. of samples received	: 3
Order number	: ----	No. of samples analysed	: 3

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.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **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 : 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
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3
EP074D: Fumigants							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved							
QC205, QC206	QC204,	06-Sep-2023	04-Sep-2023	2	07-Sep-2023	04-Sep-2023	3

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.

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)								
QC205, QC206	QC204,	**28-Aug-2023**	**----**	----	**----**	**08-Sep-2023**	11-Sep-2023	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
QC205, QC206	QC204,	**28-Aug-2023**	**08-Sep-2023**	24-Feb-2024	✓	**08-Sep-2023**	24-Feb-2024	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
QC205, QC206	QC204,	**28-Aug-2023**	**08-Sep-2023**	25-Sep-2023	✓	**10-Sep-2023**	25-Sep-2023	✓
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×
EP074B: Oxygenated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×
EP074C: Sulfonated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×
EP074E: Halogenated Aliphatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×
EP074F: Halogenated Aromatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×
EP074G: Trihalomethanes								
Soil Glass Jar - Unpreserved (EP074)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	04-Sep-2023	×	**07-Sep-2023**	04-Sep-2023	×

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))								
QC205, QC206	QC204,	**28-Aug-2023**	**07-Sep-2023**	11-Sep-2023	✓	**08-Sep-2023**	17-Oct-2023	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	11-Sep-2023	✓	**07-Sep-2023**	11-Sep-2023	✓
Soil Glass Jar - Unpreserved (EP071)								
QC205, QC206	QC204,	**28-Aug-2023**	**07-Sep-2023**	11-Sep-2023	✓	**08-Sep-2023**	17-Oct-2023	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	11-Sep-2023	✓	**07-Sep-2023**	11-Sep-2023	✓
Soil Glass Jar - Unpreserved (EP071)								
QC205, QC206	QC204,	**28-Aug-2023**	**07-Sep-2023**	11-Sep-2023	✓	**08-Sep-2023**	17-Oct-2023	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
QC205, QC206	QC204,	**28-Aug-2023**	**06-Sep-2023**	11-Sep-2023	✓	**07-Sep-2023**	11-Sep-2023	✓

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)							
Moisture Content	EA055	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	12	**16.67**	**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	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**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)							
PAH/Phenols (SIM)	EP075(SIM)	1	12	**8.33**	**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	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**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)							
PAH/Phenols (SIM)	EP075(SIM)	1	12	**8.33**	**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	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**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)							
PAH/Phenols (SIM)	EP075(SIM)	1	12	**8.33**	**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	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	8	**12.50**	**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
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).
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)
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)
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).
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.

Preparation Methods	Method	Matrix	Method Descriptions
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.

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Environmental Division
Sydney
Work Order Reference
ES2329547

Senversa Pty Ltd
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ABN 89 132 231 380

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Telephone : + 61-2-8784 8555

Job Number:	S19142	**Purchase Order:**	
Project Name:	LDC remediation	**Quote No:**	
Sampled By:	BC and ST	**Turn Around Time:**	
Project Manager:	Matt Beasley	**Page:**	1 of 5
Email Report To:	matt.beasley@senversa.com.au; bec.chapple@senversa.com.au; christopher.redford@senversa.com.au	**Phone/Mobile:**	0408 038 593

| Sample Information | | | | | Container Information | | | | |

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Laboratory: mgt/Eurofins VIC
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Job Number:	S19142	**Purchase Order:**	
Project Name:	LDC remediation	**Quote No:**	
Sampled By:	BC and ST	**Turn Around Time:**	
Project Manager:	Matt Beasley	**Page:**	2 of 5
Email Report To:	matt.beasley@senversa.com.au; bec.chapple@senversa.com.au; christopher.redford@senversa.com.au	**Phone/Mobile:**	0408 038 593

Sample Information					Container Information		Analysis Required											
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles											HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	TP16d_1.6-1.7	Soil	28/08/2023	AM	1 x jar	1											X	
	TP31_0.2-0.3	Soil	28/08/2023	PM	1 x jar	1											X	
	TP31_0.5-0.6	Soil	28/08/2023	PM	1 x jar	1											X	
	TP31_1.2-1.3	Soil	28/08/2023	PM	1 x jar	1											X	
	TP31_1.7-1.8	Soil	28/08/2023	PM	1 x jar	1											X	
	TP31_2.6-2.7	Soil	28/08/2023	PM	1 x jar	1											X	
	TP31_3.1-3.2	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_0.2-0.3	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_0.5-0.6	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_0.6-0.7	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_1.2-1.3	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_1.7-1.8	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_2.4-2.5	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_2.9-3.0	Soil	28/08/2023	PM	1 x jar	1											X	
	TP32_3.7-3.8	Soil	28/08/2023	PM	1 x jar	1											X	
	TP34_0.2-0.3	Soil	28/08/2023	PM	1 x jar	1											X	
	QC105	Soil	28/08/2023	PM	1 x jar	1											X	
	QC205	Soil	28/08/2023	PM	1 x jar	1											X	Please forward to ALS
	TP34_0.5-0.6	Soil	28/08/2023	PM	1 x jar	1											X	
	TP34_1.0-1.1	Soil	28/08/2023	PM	1 x jar	1											X	
Total						92												

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project | **Sampler Name:** B. Chapple | **Signature:** | **Date:** 29/8/23

Relinquished By:		**Method of Shipment (if applicable):**	**Received by:**	
Name/Signature: B Chapple	Date: 29/8/23	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's Iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

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Laboratory: mgt/Eurofins VIC
Address:
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Phone:

Job Number:	S19142	Purchase Order:	
Project Name:	LDC remediation	Quote No:	
Sampled By:	BC and ST	Turn Around Time:	Standard
Project Manager:	Matt Beasley	Page:	3 of 5
Email Report To:	matt.beasley@senversa.com.au; bec.chapple@senversa.com.au; christopher.redford@senversa.com.au	Phone/Mobile:	0408 038 593

Sample Information					Container Information		Analysis Required													Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles													HOLD	
	TP34_1.1-1.2	Soil	28/08/2023	AM	1 x jar	1													X	
	TP34_1.7-1.8	Soil	28/08/2023	PM	1 x jar	1													X	
	TP34_2.4-2.5	Soil	28/08/2023	PM	1 x jar	1													X	
	TP34_2.9-3.0	Soil	28/08/2023	PM	1 x jar	1													X	
	TP34_3.4-3.5	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_0.3-0.4	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_0.6-0.7	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_1.1-1.2	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_1.7-1.8	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_2.0-2.1	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_3.1-3.2	Soil	28/08/2023	PM	1 x jar	1													X	
	TP30_3.3-3.4	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_0.2-0.3	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_0.5-0.6	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_1.0-1.1	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_1.5-1.6	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_2.4-2.5	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_2.8-2.9	Soil	28/08/2023	PM	1 x jar	1													X	
	TP28_3.4-3.5	Soil	28/08/2023	PM	1 x jar	1													X	
	QC104	Soil	28/08/2023	PM	1 x jar	1													X	
Total						92														

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project | Sampler Name: B. Chapple | Signature: [signature] | Date: 29/8/23

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: B Chapple	Date: 29/8/23	Carrier / Reference #:	Name/Signature: RP	Date: 29/8
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

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Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number:	S19142	**Purchase Order:**	
Project Name:	LDC remediation	**Quote No:**	
Sampled By:	BC and ST	**Turn Around Time:**	
Project Manager:	Matt Beasley	**Page:**	4 of 5
Email Report To:	matt.beasley@senversa.com.au; bec.chapple@senversa.com.au; christopher.redford@senversa.com.au	**Phone/Mobile:**	0408 038 593

Sample Information					Container Information		Analysis Required											
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles											HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	QC204	Soil	28/08/2023	AM	1 x jar	1											X	Please forward to ALS
	TP33_0.2-0.3	Soil	29/08/2023	AM	1 x jar	1											X	
	TP33_0.6-0.7	Soil	29/08/2023	AM	1 x jar	1											X	
	TP33_1.1-1.2	Soil	29/08/2023	AM	1 x jar	1											X	
	TP33_1.6-1.7	Soil	29/08/2023	AM	1 x jar	1											X	
	QC106	Soil	29/08/2023	AM	1 x jar	1											X	
	QC206	Soil	29/08/2023	AM	1 x jar	1											X	Please forward to ALS
	TP33_2.0-2.1	Soil	29/08/2023	AM	1 x jar	1											X	
	TP33_2.2-2.3	Soil	29/08/2023	AM	1 x jar	1											X	
	TP33_2.7-2.8	Soil	29/08/2023	AM	1 x jar	1											X	
	TP33_2.9-3.0	Soil	29/08/2023	AM	1 x jar	1											X	
	TP27_0.2-0.3	Soil	29/08/2023	AM	1 x jar	1											X	
	TP27_0.6-0.7	Soil	29/08/2023	AM	1 x jar	1											X	
	TP27_1.1-1.2	Soil	29/08/2023	AM	1 x jar	1											X	
	TP27_2.1-2.2	Soil	29/08/2023	AM	1 x jar	1											X	
	TP27_2.4-2.5	Soil	29/08/2023	AM	1 x jar	1											X	
	TP29_0.2-0.3	Soil	29/08/2023	AM	1 x jar	1											X	
	TP29_0.7-0.8	Soil	29/08/2023	AM	1 x jar	1											X	
	TP29_1.3-1.4	Soil	29/08/2023	AM	1 x jar	1											X	
	TP29_1.8-1.9	Soil	29/08/2023	AM	1 x jar	1											X	
Total						92												

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project | **Sampler Name:** B-Chapple | **Signature:** | **Date:** 29/8/23

Relinquished By:		**Method of Shipment (if applicable):**	**Received by:**	
Name/Signature: B-Chapple	Date: 29/8/23	Carrier / Reference #:	Name/Signature:	Date: 29/8
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

Chain of Custody Documentation

senversa
www.senversa.com.au
ABN 89 132 231 380

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number:	S19142	**Purchase Order:**	
Project Name:	LDC remediation	**Quote No:**	
Sampled By:	BC and ST	**Turn Around Time:**	
Project Manager:	Matt Beasley	**Page:**	5 of 5
Email Report To:	matt.beasley@senversa.com.au; bec.chapple@senversa.com.au; christopher.redford@senversa.com.au	**Phone/Mobile:**	0408 038 593

Sample Information					Container Information		Analysis Required											
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles											HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	TP29_2.4-2.5	Soil	29/08/2023	AM	1 x jar	1											X	
	TP29_3.5-3.6	Soil	29/08/2023	AM	1 X jar	1											X	
	TP29_3.6-3.7	Soil	29/08/2023	AM	1 X jar	1											X	
	TP29_3.7-3.8	Soil	29/08/2023	AM	1 X jar	1											X	
	TP35_0.2-0.3	Soil	29/08/2023	AM	1 X jar	1											X	
	TP35_0.6-0.7	Soil	29/08/2023	AM	1 X jar	1											X	
	TP35_1.2-1.3	Soil	29/08/2023	AM	1 X jar	1											X	
	TP35_2.0-2.1	Soil	29/08/2023	AM	1 X jar	1											X	
	TP35_2.6-2.7	Soil	29/08/2023	AM	1 X jar	1											X	
	TP35_3.1-3.2	Soil	29/08/2023	AM	1 X jar	1											X	
	QC404	Soil	22/08/2023	AM	1 X jar	1											X	
	QC504	Soil	22/08/2023	AM	1 X jar	1											X	
Total						92												

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project | **Sampler Name:** B. Chapple | **Signature:** | **Date:** 29/8/23

Relinquished By:		**Method of Shipment (if applicable):**	**Received by:**	
Name/Signature: B Chapple	Date: 29/8/23	Carrier / Reference #:	Name/Signature:	Date: 28/8
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

Fadi Soro

Fadi
5/9/23
11:55a

From: Khaleda Ataei
Sent: Tuesday, 5 September 2023 11:38 AM
To: Fadi Soro
Cc: Jack Clifton
Subject: RE: [EXTERNAL] - S19142 samples

Environmental Division
Sydney
Work Order Reference
ES2329547

Telephone : +61-2-8784 8555

Hi Fadi,

Can you arrange for these QC samples to be tested for the following:

- TRH
- VOC
- PAH
- Metals (As, Cd, Cr, Cu, Ni, Pb, Zn, Hg)

Kind regards,

Khaleda Ataei
Project Manager, Environmental
Sydney, NSW

O: +61 2 8784 8555
D: +61 2 8784 8603
Khaleda.ataei@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com

CERTIFICATE OF ANALYSIS

Work Order	: **ES2342794**	Page	: 1 of 9
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation - Stage 1	Date Samples Received	: 07-Dec-2023 12:00
Order number	: ----	Date Analysis Commenced	: 12-Dec-2023
C-O-C number	: ----	Issue Date	: 14-Dec-2023 17:05
Sampler	: Christopher Redford, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 3		
No. of samples analysed	: 3		

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
- 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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 Contract 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.

- 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.
- EP080: 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, 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.
- EG035: Positive Mercury result ES2342794 #3 has been confirmed by reanalysis.
- EP074/EP080: Particular samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC211	QC213	QC214	----	----
			Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	01-Dec-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2342794-001	ES2342794-002	ES2342794-003	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**17.1**	**14.8**	**16.9**	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**7**	<5	**----**	**----**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	**----**	**----**
Chromium	7440-47-3	2	mg/kg	**14**	**5**	**5**	**----**	**----**
Copper	7440-50-8	5	mg/kg	**82**	**25**	**46**	**----**	**----**
Lead	7439-92-1	5	mg/kg	**215**	**361**	**178**	**----**	**----**
Nickel	7440-02-0	2	mg/kg	**7**	**7**	**4**	**----**	**----**
Zinc	7440-66-6	5	mg/kg	**167**	**194**	**132**	**----**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.2**	**0.2**	**0.8**	**----**	**----**
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	**1.4**	**----**	**----**
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	<1.0	**----**	**----**
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	<10	**----**	**----**
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<10	**----**	**----**
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	<10	**----**	**----**
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	<10	**----**	**----**
EP074C: Sulfonated Compounds								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC211	QC213	QC214	----	----
			Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	01-Dec-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2342794-001	ES2342794-002	ES2342794-003	--------	--------
				Result	Result	Result	----	----
EP074C: Sulfonated Compounds - Continued								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<10	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	<10	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<10	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	<10	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	<10	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<10	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	**17.0**	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Trichloroethene	79-01-6	0.5	mg/kg	**1.6**	<0.5	**14.6**	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<1.0	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC211	QC213	QC214	----	----
			Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	01-Dec-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2342794-001	ES2342794-002	ES2342794-003	--------	--------
				Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued								
Tetrachloroethene	127-18-4	0.5	mg/kg	**6.0**	<0.5	**506**	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<1.0	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	**2.6**	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	**1.7**	**1.1**	**2.1**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC211	QC213	QC214	----	----
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	01-Dec-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2342794-001	ES2342794-002	ES2342794-003	--------	--------
					Result	Result	Result	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	**1.7**	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	**4.0**	----	----
Phenanthrene	85-01-8	0.5	mg/kg		**12.0**	**4.6**	**24.7**	----	----
Anthracene	120-12-7	0.5	mg/kg		**2.0**	**1.4**	**7.7**	----	----
Fluoranthene	206-44-0	0.5	mg/kg		**17.3**	**10.0**	**31.8**	----	----
Pyrene	129-00-0	0.5	mg/kg		**14.3**	**9.7**	**32.0**	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		**6.5**	**5.4**	**13.9**	----	----
Chrysene	218-01-9	0.5	mg/kg		**5.2**	**4.5**	**13.4**	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		**6.1**	**5.3**	**12.2**	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**2.4**	**2.0**	**5.0**	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**5.1**	**4.9**	**11.8**	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**2.5**	**2.1**	**4.4**	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		**0.5**	**0.5**	**1.1**	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**2.8**	**2.4**	**5.1**	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		**78.4**	**53.9**	**174**	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		**7.4**	**6.9**	**16.6**	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**7.4**	**6.9**	**16.6**	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**7.4**	**6.9**	**16.6**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	**1030**	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	**320**	----	----
C15 - C28 Fraction	----	100	mg/kg		**270**	**190**	**500**	----	----
C29 - C36 Fraction	----	100	mg/kg		**150**	**140**	**240**	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**420**	**330**	**1060**	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		**11**	<10	**1030**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC211	QC213	QC214	----	----
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	01-Dec-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2342794-001	ES2342794-002	ES2342794-003	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		**11**	<10	**1030**	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	**240**	----	----
>C16 - C34 Fraction	----	100	mg/kg		**380**	**280**	**670**	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	**110**	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**380**	**280**	**1020**	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	**240**	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<1.0	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<1.0	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<1.0	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<1.0	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<1.0	----	----
^ **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	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**85.6**	**87.7**	**79.7**	----	----
Toluene-D8	2037-26-5	0.5	%		**89.4**	**86.8**	**101**	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**96.8**	**93.8**	**113**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**75.1**	**80.6**	**80.2**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**80.6**	**85.2**	**86.2**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**52.0**	**21.1**	**70.9**	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**90.8**	**93.5**	**95.3**	----	----
Anthracene-d10	1719-06-8	0.5	%		**86.1**	**90.4**	**93.1**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC211	QC213	QC214	----	----
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	01-Dec-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2342794-001	ES2342794-002	ES2342794-003	--------	--------
					Result	Result	Result	----	----
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		**97.2**	**100**	**105**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**78.8**	**80.5**	**71.6**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**82.0**	**79.5**	**92.4**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**101**	**97.2**	**117**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2342794**	Page	: 1 of 11
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation - Stage 1	Date Samples Received	: 07-Dec-2023
Order number	: ----	Date Analysis Commenced	: 12-Dec-2023
C-O-C number	: ----	Issue Date	: 14-Dec-2023
Sampler	: Christopher Redford, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 3		
No. of samples analysed	: 3		

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 5485719)									
ES2341924-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	12	18.5	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	10	16.3	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	6	6	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	18	19	7.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	27	31	11.9	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5485736)									
ES2341924-004	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	17.6	19.1	8.5	0% - 50%
ES2341988-051	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	27.0	27.4	1.4	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5485722)									
ES2341924-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5485100)									
ES2342584-001	Anonymous	EP074: Styrene	100-42-5	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

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: 5485100) - continued									
ES2342584-001	Anonymous	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: 5485100)									
ES2342584-001	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: 5485100)									
ES2342584-001	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5485100)									
ES2342584-001	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: 5485100)									
ES2342584-001	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

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: 5485100) - continued									
ES2342584-001	Anonymous	EP074: Hexachlorobutadiene	87-68-3	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: 5485100)									
ES2342584-001	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: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	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: 5485100)									
ES2342584-001	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: 5482396)									
ES2342567-007	Anonymous	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

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: 5482396) - continued									
ES2342567-007	Anonymous	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2342567-001	Anonymous	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5482395)									
ES2342567-007	Anonymous	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
ES2342567-001	Anonymous	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5485102)									
ES2342584-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5482395)									
ES2342567-007	Anonymous	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

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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5482395) - continued									
ES2342567-007	Anonymous	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2342567-001	Anonymous	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5485102)									
ES2342584-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5485102)									
ES2342584-001	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

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: 5485719)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	89.2	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	111	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	106	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	92.0	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	101	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	101	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	95.1	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5485722)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	78.7	70.0	125
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5485100)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	102	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	99.2	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	99.0	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	100	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	99.3	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	102	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	99.6	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	100	59.0	125
EP074B: Oxygenated Compounds (QCLot: 5485100)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	103	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	80.6	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	107	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	82.6	54.0	136
EP074C: Sulfonated Compounds (QCLot: 5485100)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	102	54.0	126
EP074D: Fumigants (QCLot: 5485100)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	98.2	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	102	51.0	119

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
EP074D: Fumigants (QCLot: 5485100) - continued								
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	104	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	103	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 5485100)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	102	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	102	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	99.6	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	104	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	98.6	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	101	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	99.0	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	98.4	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	101	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	101	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	100	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	99.9	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	102	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	99.2	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	104	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	99.4	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	105	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	106	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	101	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	102	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	103	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	101	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	108	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	102	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	104	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	111	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	96.9	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 5485100)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	99.4	70.0	114

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
EP074F: Halogenated Aromatic Compounds (QCLot: 5485100) - continued								
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	96.3	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	101	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	102	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	102	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	102	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	98.1	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	100.0	52.0	122
EP074G: Trihalomethanes (QCLot: 5485100)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	103	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	108	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	107	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	106	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5482396)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	122	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	113	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	122	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	120	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	127	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	125	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	126	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	126	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	114	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	125	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	100	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	108	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	110	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	99.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	99.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	94.4	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5482395)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	97.8	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.5	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	100	71.0	129

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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5485102)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	83.7	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5482395)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	92.8	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	102	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5485102)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	82.8	72.4	133
EP080: BTEXN (QCLot: 5485102)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	89.8	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	97.9	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	98.3	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	99.3	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	104	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.1	78.8	122

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: 5485719)							
ES2341924-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	82.1	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.5	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	86.1	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	89.4	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	91.5	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	87.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	86.5	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5485722)							
ES2341924-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	80.9	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5485100)							
ES2342584-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	86.7	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	98.7	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*
EP074F: Halogenated Aromatic Compounds (QCLot: 5485100)							
ES2342584-001	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	106	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5482396)							
ES2342567-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	124	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	124	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5482395)							
ES2342567-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	112	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	117	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	117	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5485102)							
ES2342584-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	97.5	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5482395)							
ES2342567-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	117	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	120	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	97.7	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5485102)							
ES2342584-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	95.8	61.1	142
EP080: BTEXN (QCLot: 5485102)							
ES2342584-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	97.8	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	108	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	111	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	109	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	113	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	97.1	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2342794**	Page	: 1 of 7
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation - Stage 1	Date Samples Received	: 07-Dec-2023
Site	: ----	Issue Date	: 14-Dec-2023
Sampler	: Christopher Redford, MATTHEW LINZ	No. of samples received	: 3
Order number	: ----	No. of samples analysed	: 3

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.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

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.**

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075(SIM)S: Phenolic Compound Surrogates	ES2342794-002	QC213	**2.4.6-Tribromophenol**	118-79-6	21.1 %	40.0-138 %	**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
EP074A: Monocyclic Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	4	14-Dec-2023	08-Dec-2023	6
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	6	13-Dec-2023	06-Dec-2023	7
EP074B: Oxygenated Compounds						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	4	14-Dec-2023	08-Dec-2023	6
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	6	13-Dec-2023	06-Dec-2023	7
EP074C: Sulfonated Compounds						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	4	14-Dec-2023	08-Dec-2023	6
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	6	13-Dec-2023	06-Dec-2023	7
EP074D: Fumigants						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	4	14-Dec-2023	08-Dec-2023	6
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	6	13-Dec-2023	06-Dec-2023	7
EP074E: Halogenated Aliphatic Compounds						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	4	14-Dec-2023	08-Dec-2023	6
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	6	13-Dec-2023	06-Dec-2023	7
EP074F: Halogenated Aromatic Compounds						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	4	14-Dec-2023	08-Dec-2023	6
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	6	13-Dec-2023	06-Dec-2023	7
EP074G: Trihalomethanes						

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
EP074G: Trihalomethanes - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved QC214	12-Dec-2023	08-Dec-2023	**4**	14-Dec-2023	08-Dec-2023	**6**
Soil Glass Jar - Unpreserved QC211, QC213	12-Dec-2023	06-Dec-2023	**6**	13-Dec-2023	06-Dec-2023	**7**

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: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QC214	**01-Dec-2023**	**----**	----	----	**12-Dec-2023**	15-Dec-2023	✓
Soil Glass Jar - Unpreserved (EA055) QC211, QC213	**29-Nov-2023**	**----**	----	----	**12-Dec-2023**	13-Dec-2023	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QC214	**01-Dec-2023**	**12-Dec-2023**	29-May-2024	✓	**13-Dec-2023**	29-May-2024	✓
Soil Glass Jar - Unpreserved (EG005T) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	27-May-2024	✓	**13-Dec-2023**	27-May-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QC214	**01-Dec-2023**	**12-Dec-2023**	29-Dec-2023	✓	**14-Dec-2023**	29-Dec-2023	✓
Soil Glass Jar - Unpreserved (EG035T) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	27-Dec-2023	✓	**14-Dec-2023**	27-Dec-2023	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×

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
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QC214	**01-Dec-2023**	**12-Dec-2023**	08-Dec-2023	×	**14-Dec-2023**	08-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC214	**01-Dec-2023**	**13-Dec-2023**	15-Dec-2023	✓	**14-Dec-2023**	22-Jan-2024	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) QC211, QC213	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**14-Dec-2023**	22-Jan-2024	✓

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 (EP080) QC214	**01-Dec-2023**	**12-Dec-2023**	15-Dec-2023	✓	**14-Dec-2023**	15-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP071) QC214	**01-Dec-2023**	**13-Dec-2023**	15-Dec-2023	✓	**13-Dec-2023**	22-Jan-2024	✓
Soil Glass Jar - Unpreserved (EP080) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	13-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP071) QC211, QC213	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	22-Jan-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QC214	**01-Dec-2023**	**12-Dec-2023**	15-Dec-2023	✓	**14-Dec-2023**	15-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP071) QC214	**01-Dec-2023**	**13-Dec-2023**	15-Dec-2023	✓	**13-Dec-2023**	22-Jan-2024	✓
Soil Glass Jar - Unpreserved (EP080) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	13-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP071) QC211, QC213	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	22-Jan-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC214	**01-Dec-2023**	**12-Dec-2023**	15-Dec-2023	✓	**14-Dec-2023**	15-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP080) QC211, QC213	**29-Nov-2023**	**12-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	13-Dec-2023	✓

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)							
Moisture Content	EA055	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**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
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).
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)
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)
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).
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.

Preparation Methods	Method	Matrix	Method Descriptions
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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2342794**		
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: christopher.redford@senversa.com.au	E-mail	: sandy.phan@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: S19142 Waterloo Remediation - Stage 1	Page	: 1 of 2
Order number	: ----	Quote number	: EB2023SENVER0001 (EN/000)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Christopher Redford, MATTHEW LINZ		

Dates

Date Samples Received	: 07-Dec-2023 12:00	Issue Date	: 09-Dec-2023
Client Requested Due Date	: 14-Dec-2023	Scheduled Reporting Date	: **14-Dec-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 14.1'C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 3 / 3

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 QC212 was not received.**
- **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.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- 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.

- **No sample container / preservation non-compliance exists.**

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 - S-02 8 Metals (incl. Digestion)	SOIL - S-10 TRH/VOC/PAH
ES2342794-001	29-Nov-2023 00:00	QC211	✓	✓	✓
ES2342794-002	29-Nov-2023 00:00	QC213	✓	✓	✓
ES2342794-003	01-Dec-2023 00:00	QC214	✓	✓	✓

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
EP074: Volatile Organic Compounds							
QC211	Soil Glass Jar - Unpreserved	06-Dec-2023	06-Dec-2023	07-Dec-2023	×	----	----
QC213	Soil Glass Jar - Unpreserved	06-Dec-2023	06-Dec-2023	07-Dec-2023	×	----	----

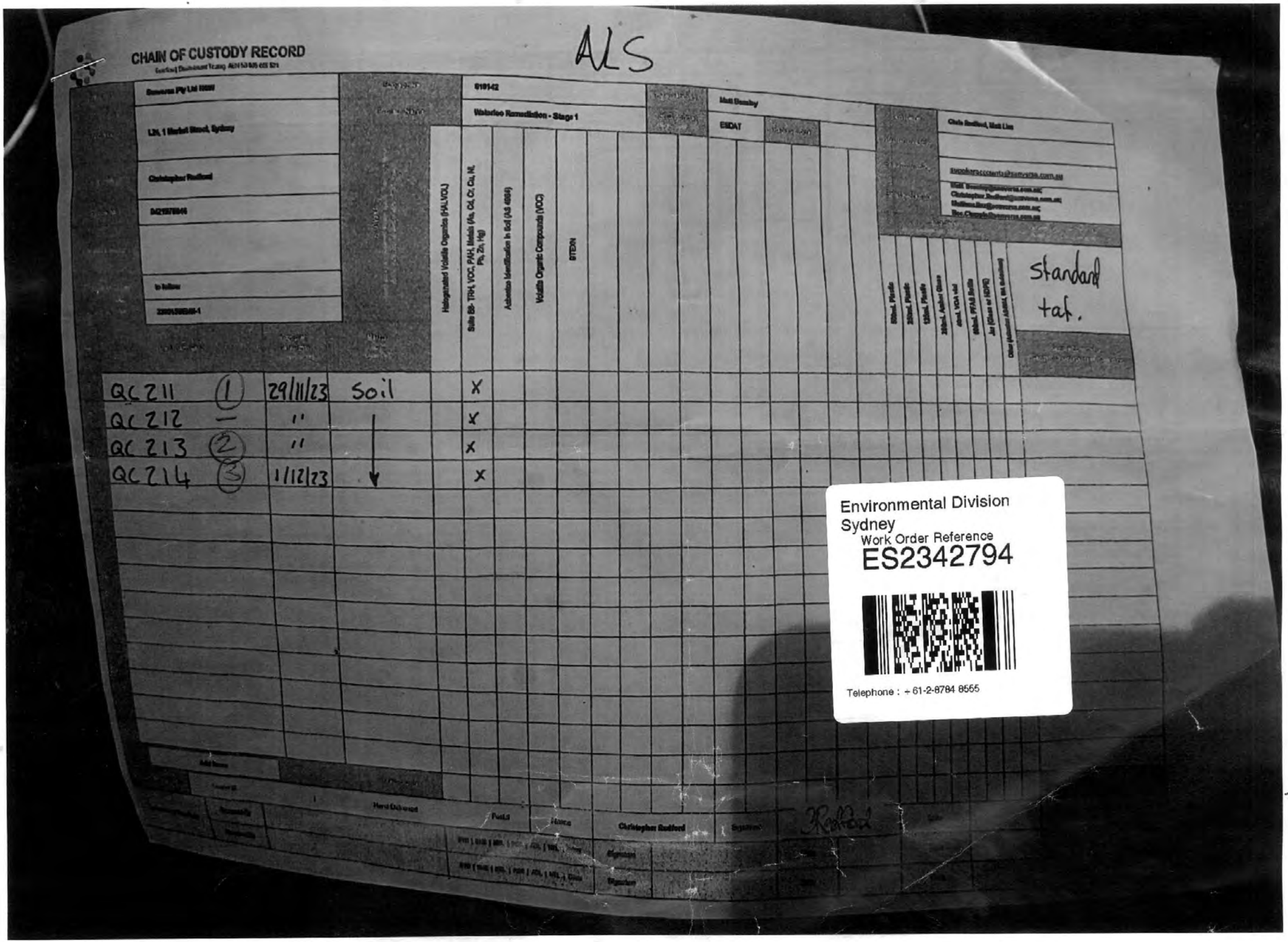
Requested Deliverables

Christopher Redford

- *AU Certificate of Analysis - NATA (COA)	Email	christopher.redford@senversa.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	christopher.redford@senversa.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	christopher.redford@senversa.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	christopher.redford@senversa.com.au
- A4 - AU Tax Invoice (INV)	Email	christopher.redford@senversa.com.au
- Chain of Custody (CoC) (COC)	Email	christopher.redford@senversa.com.au
- EDI Format - ESDAT (ESDAT)	Email	christopher.redford@senversa.com.au

SUPPLIER ACCOUNTS

- A4 - AU Tax Invoice (INV)	Email	supplieraccounts@senversa.com.au



Asmd
7/12
1200

CERTIFICATE OF ANALYSIS

Work Order	: **ES2342853**	Page	: 1 of 6
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142	Date Samples Received	: 08-Dec-2023 11:15
Order number	: ----	Date Analysis Commenced	: 12-Dec-2023
C-O-C number	: ----	Issue Date	: 15-Dec-2023 15:40
Sampler	: Christopher Redford, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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
- 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*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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 Contract 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.

- 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.
- EP074: Samples not received in a suitable time frame to conduct the analysis XXX within the recommended holding time.
- EP074: Particular samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC215	QC216	----	----	----
				Sampling date / time	04-Dec-2023 00:00	05-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2342853-001	ES2342853-002	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**13.2**	**19.7**	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<1.0	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<1.0	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<1.0	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<1.0	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg		<1.0	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<1.0	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg		<1.0	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg		<1.0	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		<1.0	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		<1.0	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		<1.0	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		<1.0	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		<1.0	<0.5	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		<10	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		<10	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		<10	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		<10	<5	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		<1.0	<0.5	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		<1.0	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		<1.0	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC215	QC216	----	----	----
				Sampling date / time	04-Dec-2023 00:00	05-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2342853-001	ES2342853-002	--------	--------	--------
					Result	Result	----	----	----
EP074D: Fumigants - Continued									
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		<1.0	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		<10	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg		<10	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg		<10	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg		<10	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg		<10	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		<10	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg		<1.0	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg		<1.0	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		<1.0	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		<1.0	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		**7.8**	**2.5**	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		<1.0	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<1.0	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<1.0	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		**2.0**	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		<1.0	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<1.0	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<1.0	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		**464**	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<1.0	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<1.0	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<1.0	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<1.0	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC215	QC216	----	----	----
				Sampling date / time	04-Dec-2023 00:00	05-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2342853-001	ES2342853-002	--------	--------	--------
					Result	Result	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<1.0	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<1.0	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<1.0	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<1.0	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		<1.0	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		<1.0	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<1.0	<0.5	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<1.0	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<1.0	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<1.0	<0.5	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<1.0	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		<1.0	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		<1.0	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg		<1.0	<0.5	----	----	----
EP074H: Naphthalene									
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**64.2**	**87.8**	----	----	----
Toluene-D8	2037-26-5	0.5	%		**72.4**	**86.3**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**95.0**	**96.4**	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122

QUALITY CONTROL REPORT

Work Order	: **ES2342853**	Page	: 1 of 7
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142	Date Samples Received	: 08-Dec-2023
Order number	: ----	Date Analysis Commenced	: 12-Dec-2023
C-O-C number	: ----	Issue Date	: 15-Dec-2023
Sampler	: Christopher Redford, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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 (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5491788)									
ES2342671-008	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	59.3	58.5	1.4	0% - 20%
ES2342778-020	Anonymous	EA055: Moisture Content	----	0.1	%	7.3	6.0	19.2	0% - 20%
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5485054)									
ES2342927-001	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
		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: 5485054)									
ES2342927-001	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

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: 5485054) - continued									
ES2342927-001	Anonymous	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: 5485054)									
ES2342927-001	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5485054)									
ES2342927-001	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: 5485054)									
ES2342927-001	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: Hexachlorobutadiene	87-68-3	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

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: 5485054) - continued									
ES2342927-001	Anonymous	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: 5485054)									
ES2342927-001	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: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	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: 5485054)									
ES2342927-001	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
EP074H: Naphthalene (QC Lot: 5485054)									
ES2342927-001	Anonymous	EP074: Naphthalene	91-20-3	1	mg/kg	<1	<1	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
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5485054)								
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	99.5	71.0	121
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.6	65.0	131
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	99.1	72.0	114
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	96.4	70.0	116
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	101	67.0	113
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.7	75.0	115
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	99.0	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	98.8	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	97.3	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	97.5	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	98.1	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	97.1	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	99.8	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	98.2	59.0	125
EP074B: Oxygenated Compounds (QCLot: 5485054)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	99.3	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	99.5	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	99.6	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	104	54.0	136
EP074C: Sulfonated Compounds (QCLot: 5485054)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	97.0	54.0	126
EP074D: Fumigants (QCLot: 5485054)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	96.5	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	97.2	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	101	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	95.8	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	96.8	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 5485054)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	88.1	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	93.2	41.0	141

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
EP074E: Halogenated Aliphatic Compounds (QCLot: 5485054) - continued								
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	95.4	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	91.2	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	95.1	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	97.1	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	98.9	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	84.3	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	101	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	98.5	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	100.0	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	98.4	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	99.5	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	99.2	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	101	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	95.9	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	96.1	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	101	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	98.7	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	100	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	107	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	104	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	97.4	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	97.5	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	93.6	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	97.0	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	93.3	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 5485054)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	98.2	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	98.9	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	98.9	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	96.6	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	101	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	99.0	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	99.6	70.0	114

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
EP074F: Halogenated Aromatic Compounds (QCLot: 5485054) - continued								
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	94.1	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	96.1	52.0	122
EP074G: Trihalomethanes (QCLot: 5485054)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	100	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	96.2	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	96.8	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	100	60.0	126
EP074H: Naphthalene (QCLot: 5485054)								
EP074: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	99.4	67.0	129

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
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5485054)							
ES2342927-001	Anonymous	EP074: Benzene	71-43-2	2.5 mg/kg	92.2	70.0	130
		EP074: Toluene	108-88-3	2.5 mg/kg	95.0	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5485054)							
ES2342927-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	87.7	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	90.1	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 5485054)							
ES2342927-001	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	97.8	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2342853**	Page	: 1 of 6
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Christopher Redford	Telephone	: +61-2-8784 8555
Project	: S19142	Date Samples Received	: 08-Dec-2023
Site	: ----	Issue Date	: 15-Dec-2023
Sampler	: Christopher Redford, MATTHEW LINZ	No. of samples received	: 2
Order number	: ----	No. of samples analysed	: 2

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.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **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 : 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
EP074A: Monocyclic Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074B: Oxygenated Compounds						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074C: Sulfonated Compounds						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074D: Fumigants						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074E: Halogenated Aliphatic Compounds						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074F: Halogenated Aromatic Compounds						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074G: Trihalomethanes						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	1
EP074H: Naphthalene						
Soil Glass Jar - Unpreserved						
QC215	12-Dec-2023	11-Dec-2023	1	12-Dec-2023	11-Dec-2023	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

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) QC215	04-Dec-2023	----	----	----	14-Dec-2023	18-Dec-2023	✓
Soil Glass Jar - Unpreserved (EA055) QC216	05-Dec-2023	----	----	----	14-Dec-2023	19-Dec-2023	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QC215	04-Dec-2023	12-Dec-2023	11-Dec-2023	×	12-Dec-2023	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	05-Dec-2023	12-Dec-2023	12-Dec-2023	✓	12-Dec-2023	12-Dec-2023	✓

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
EP074H: Naphthalene							
Soil Glass Jar - Unpreserved (EP074) QC215	**04-Dec-2023**	**12-Dec-2023**	11-Dec-2023	×	**12-Dec-2023**	11-Dec-2023	×
Soil Glass Jar - Unpreserved (EP074) QC216	**05-Dec-2023**	**12-Dec-2023**	12-Dec-2023	✓	**12-Dec-2023**	12-Dec-2023	✓

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)							
Moisture Content	EA055	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Volatile Organic Compounds	EP074	1	4	**25.00**	**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*
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).
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).

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
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.

CHAIN OF CUSTODY RECORD

HLS

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CERTIFICATE OF ANALYSIS

Work Order	: **ES2342855**	Page	: 1 of 9
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATTHEW LINZ	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation - Stage 1	Date Samples Received	: 08-Dec-2023 11:15
Order number	: ----	Date Analysis Commenced	: 13-Dec-2023
C-O-C number	: ----	Issue Date	: 18-Dec-2023 09:50
Sampler	: Chris Redford, Matt Linz		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 1		
No. of samples analysed	: 1		

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
- 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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 Contract 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.

- 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.
- EP080: 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, 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC212	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2342855-001	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**21.6**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		<2	----	----	----	----
Copper	7440-50-8	5	mg/kg		<5	----	----	----	----
Lead	7439-92-1	5	mg/kg		**30**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg		**109**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Styrene	100-42-5	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									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC212	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2342855-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074C: Sulfonated Compounds - Continued									
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC212	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2342855-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
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	----	----	----	----
Hexachlorobutadiene	87-68-3	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	----	----	----	----
1.3-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	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	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	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC212	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2342855-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
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**	----	----	----	----
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	QC212	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2342855-001	--------	--------	--------	--------
					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	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**91.8**	----	----	----	----
Toluene-D8	2037-26-5	0.5	%		**82.8**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**108**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**96.8**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**89.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**95.8**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**85.2**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**97.2**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC212	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2342855-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		**97.8**	**----**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**78.8**	**----**	**----**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**80.5**	**----**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**114**	**----**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2342855**	Page	: 1 of 10
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATTHEW LINZ	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation - Stage 1	Date Samples Received	: 08-Dec-2023
Order number	: ----	Date Analysis Commenced	: 13-Dec-2023
C-O-C number	: ----	Issue Date	: 18-Dec-2023
Sampler	: Chris Redford, Matt Linz		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 1		
No. of samples analysed	: 1		

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*
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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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 5489044)									
WN2314678-003	Anonymous	EG005T: Cadmium	7440-43-9	1 (26)*	mg/kg	<26	<26	0.0	No Limit
		EG005T: Chromium	7440-47-3	2 (53)*	mg/kg	<52	<53	3.1	No Limit
		EG005T: Nickel	7440-02-0	2 (53)*	mg/kg	<52	<53	3.1	No Limit
		EG005T: Arsenic	7440-38-2	5 (53)*	mg/kg	<52	<53	3.1	No Limit
		EG005T: Copper	7440-50-8	5 (53)*	mg/kg	<52	<53	3.1	No Limit
		EG005T: Lead	7439-92-1	5 (53)*	mg/kg	69	66	4.6	No Limit
		EG005T: Zinc	7440-66-6	5 (50)*	mg/kg	23.3 %	206000	12.3	0% - 20%
ES2342844-023	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	31	30	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	4	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	14	14	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	14	14	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	16	16	0.0	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5489045)									
ES2342844-024	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	14.1	14.0	0.8	0% - 50%
WN2314678-001	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	<1.0	<1.0	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5489043)									
ES2342844-023	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5489727)									

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: 5489727) - continued									
ES2343179-001	Anonymous	EP074: Styrene	100-42-5	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: 5489727)									
ES2343179-001	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: 5489727)									
ES2343179-001	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5489727)									
ES2343179-001	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: 5489727)									
ES2343179-001	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

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: 5489727) - continued									
ES2343179-001	Anonymous	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: Hexachlorobutadiene	87-68-3	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: 5489727)									
ES2343179-001	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: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	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: 5489727)									
ES2343179-001	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: 5488500)									
EM2322010-036	Anonymous	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

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: 5488500) - continued									
EM2322010-036	Anonymous	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5488499)									
EM2322010-036	Anonymous	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5489728)									
ES2343179-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5488499)									
EM2322010-036	Anonymous	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5489728)									
ES2343179-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5489728)									
ES2343179-001	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

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: 5489044)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	110	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	127	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	123	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	110	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	108	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	107	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5489043)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	74.7	70.0	125
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5489727)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	99.8	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	101	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	99.9	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	101	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	98.4	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	102	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	102	59.0	125
EP074B: Oxygenated Compounds (QCLot: 5489727)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	101	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	90.5	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	103	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	99.0	54.0	136
EP074C: Sulfonated Compounds (QCLot: 5489727)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	92.3	54.0	126
EP074D: Fumigants (QCLot: 5489727)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	98.3	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	100	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	97.5	51.0	119

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
EP074D: Fumigants (QCLot: 5489727) - continued								
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	99.1	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 5489727)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	83.4	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	93.3	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	94.6	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	95.4	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	98.4	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	99.5	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	104	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	84.6	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	98.8	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	102	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	103	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	99.8	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	100	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	97.2	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	96.8	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	100	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	99.9	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	97.4	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	102	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	101	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	106	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	100	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	94.8	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	94.9	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	102	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 5489727)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	101	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	99.2	70.0	114

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
EP074F: Halogenated Aromatic Compounds (QCLot: 5489727) - continued								
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	101	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	101	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	102	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	102	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	101	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	106	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	108	52.0	122
EP074G: Trihalomethanes (QCLot: 5489727)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	124	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	102	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	94.9	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	93.8	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5488500)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	104	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	98.8	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	107	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	105	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	115	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	110	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	108	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	105	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	107	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	100	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	107	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	103	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	97.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	102	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	102	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5488499)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	99.6	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	100	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	87.8	71.0	129

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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5489728)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	86.6	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5488499)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	103	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	97.1	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	97.4	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5489728)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	80.4	72.4	133
EP080: BTEXN (QCLot: 5489728)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	110	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	97.3	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	95.8	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	101	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.5	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.7	78.8	122

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: 5489044)							
ES2342844-023	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	92.0	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	97.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	96.7	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	95.1	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.7	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	101	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5489043)							
ES2342844-023	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	101	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5489727)							
ES2343179-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	72.7	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	74.6	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*
EP074F: Halogenated Aromatic Compounds (QCLot: 5489727)							
ES2343179-001	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	72.1	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5488500)							
EM2322010-036	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.6	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	98.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5488499)							
EM2322010-036	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	114	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	107	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	108	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5489728)							
ES2343179-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	80.0	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5488499)							
EM2322010-036	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	109	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	122	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	116	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5489728)							
ES2343179-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	76.6	61.1	142
EP080: BTEXN (QCLot: 5489728)							
ES2343179-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	95.1	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	86.9	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	89.1	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	94.7	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	95.7	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.0	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2342855**	Page	: 1 of 6
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATTHEW LINZ	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation - Stage 1	Date Samples Received	: 08-Dec-2023
Site	: ----	Issue Date	: 18-Dec-2023
Sampler	: Chris Redford, Matt Linz	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

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.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **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 : 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
EP074A: Monocyclic Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**
EP074B: Oxygenated Compounds						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**
EP074C: Sulfonated Compounds						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**
EP074D: Fumigants						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**
EP074E: Halogenated Aliphatic Compounds						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**
EP074F: Halogenated Aromatic Compounds						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**
EP074G: Trihalomethanes						
Soil Glass Jar - Unpreserved						
QC212	13-Dec-2023	06-Dec-2023	**7**	13-Dec-2023	06-Dec-2023	**7**

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
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
QC212	**29-Nov-2023**	**----**	----	**----**	**13-Dec-2023**	13-Dec-2023	✓

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
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QC212	**29-Nov-2023**	**13-Dec-2023**	27-May-2024	✓	**15-Dec-2023**	27-May-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QC212	**29-Nov-2023**	**13-Dec-2023**	27-Dec-2023	✓	**15-Dec-2023**	27-Dec-2023	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QC212	**29-Nov-2023**	**13-Dec-2023**	06-Dec-2023	×	**13-Dec-2023**	06-Dec-2023	×
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC212	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**14-Dec-2023**	22-Jan-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QC212	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	13-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP071) QC212	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**14-Dec-2023**	22-Jan-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QC212	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	13-Dec-2023	✓
Soil Glass Jar - Unpreserved (EP071) QC212	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**14-Dec-2023**	22-Jan-2024	✓

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)							
QC212	**29-Nov-2023**	**13-Dec-2023**	13-Dec-2023	✓	**13-Dec-2023**	13-Dec-2023	✓

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)							
Moisture Content	EA055	2	16	**12.50**	**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
Total Mercury by FIMS	EG035T	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**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
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).
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)
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)
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).
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.

Preparation Methods	Method	Matrix	Method Descriptions
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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2342855**

Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATTHEW LINZ	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: matthew.linz@senversa.com.au	E-mail	: sandy.phan@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: S19142 Waterloo Remediation - Stage 1	Page	: 1 of 2
Order number	: ----	Quote number	: EB2023SENVER0001 (EN/000)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Chris Redford, Matt Linz		

Dates

Date Samples Received	: 08-Dec-2023 11:15	Issue Date	: 12-Dec-2023
Client Requested Due Date	: 15-Dec-2023	Scheduled Reporting Date	: **15-Dec-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 13.4'C - Ice Bricks present
Receipt Detail	: Large esky	No. of samples received / analysed	: 1 / 1

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
- 12/12/23: This is an updated SRN which indicates the addition of analysis on sample QC212.
- **Did not receive sample QC211, QC213, QC214**
- **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.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- 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.

- **No sample container / preservation non-compliance exists.**

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 - S-02 8 Metals (incl. Digestion)	SOIL - S-10 TRH/VOC/PAH
ES2342855-001	29-Nov-2023 00:00	QC212	✓	✓	✓

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
EP074: Volatile Organic Compounds							
QC212	Soil Glass Jar - Unpreserved	06-Dec-2023	06-Dec-2023	08-Dec-2023	×	----	----

Requested Deliverables

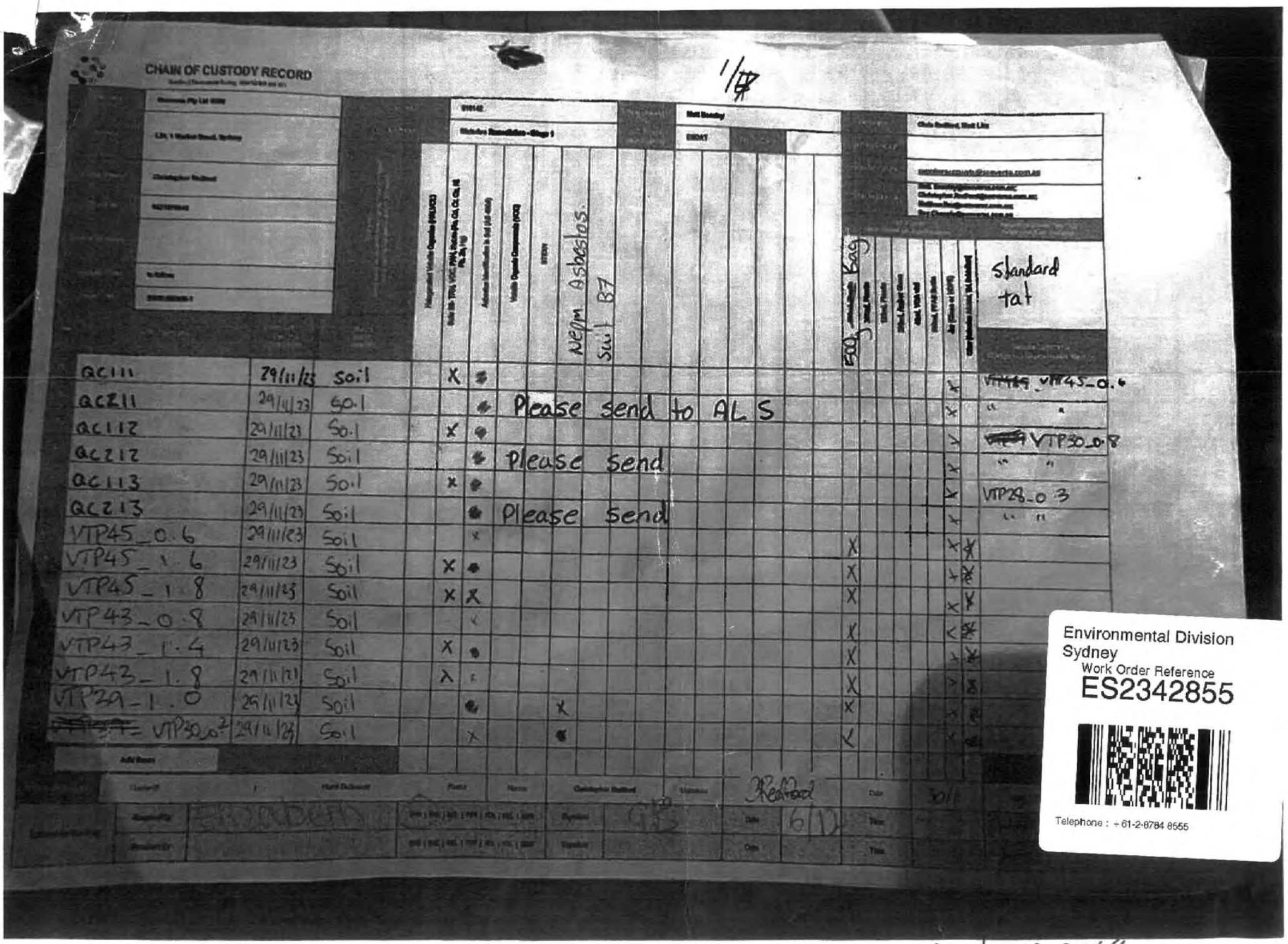
BEC CHAPPLE
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email — bec.chapple@senversa.com.au
- Chain of Custody (CoC) (COC) — Email — bec.chapple@senversa.com.au

Christopher Redford
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email — christopher.redford@senversa.com.au
- A4 - AU Tax Invoice (INV) — Email — christopher.redford@senversa.com.au
- Chain of Custody (CoC) (COC) — Email — christopher.redford@senversa.com.au

MATT BEASLEY
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email — matt.beasley@senversa.com.au
- A4 - AU Tax Invoice (INV) — Email — matt.beasley@senversa.com.au
- Chain of Custody (CoC) (COC) — Email — matt.beasley@senversa.com.au

MATTHEW LINZ
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email — matthew.linz@senversa.com.au
- A4 - AU Tax Invoice (INV) — Email — matthew.linz@senversa.com.au
- Chain of Custody (CoC) (COC) — Email — matthew.linz@senversa.com.au

SUPPLIER ACCOUNTS
- A4 - AU Tax Invoice (INV) — Email — supplieraccounts@senversa.com.au



CHAIN OF CUSTODY RECORD

1/8

Standard tat

Please send to ALS

Please send

Please send

| | | |

CHAIN OF CUSTODY RECORD

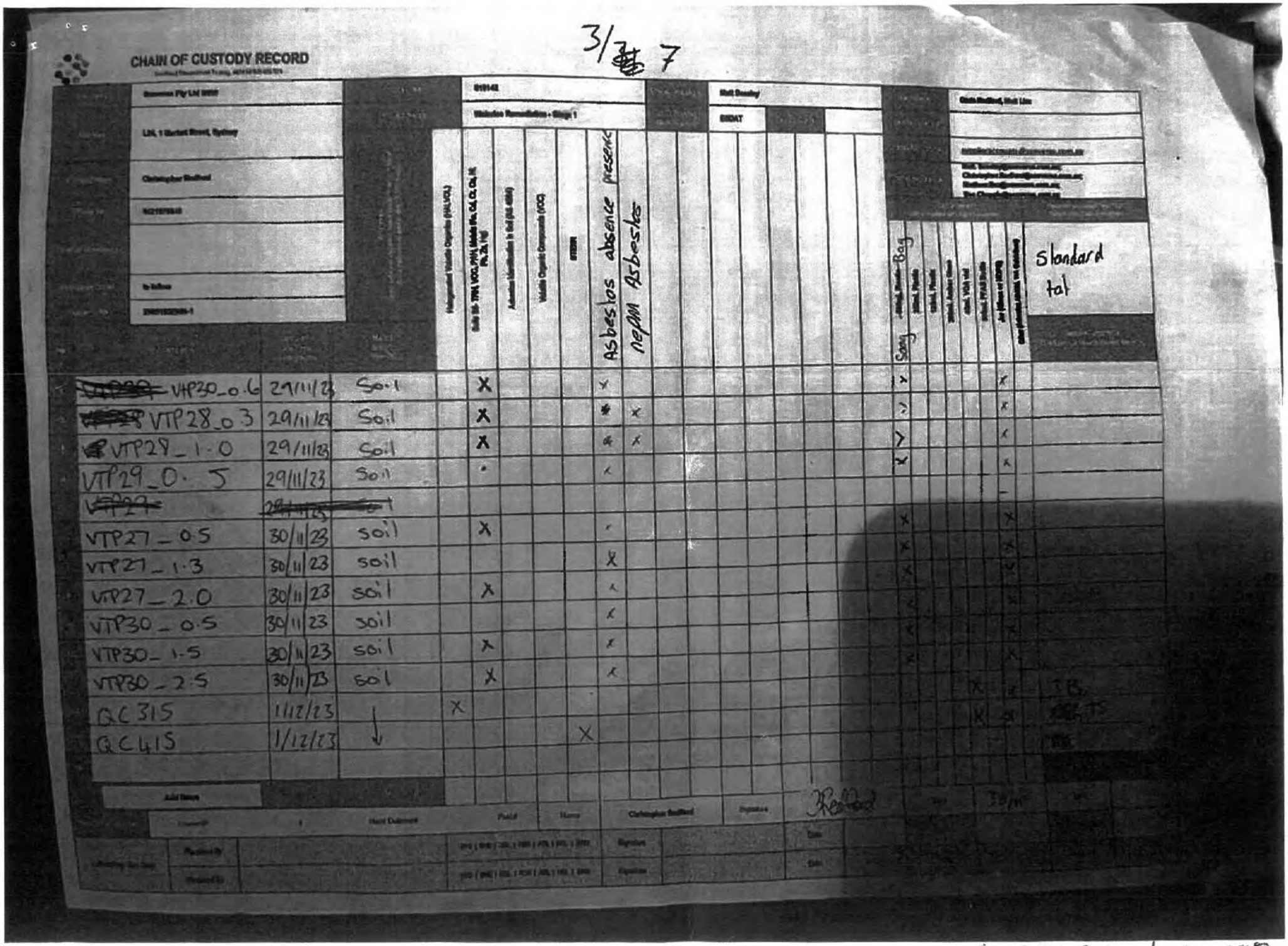
2/7

Asbestos Absence/presence

Asbestos Weight

Standard tat

| | | |



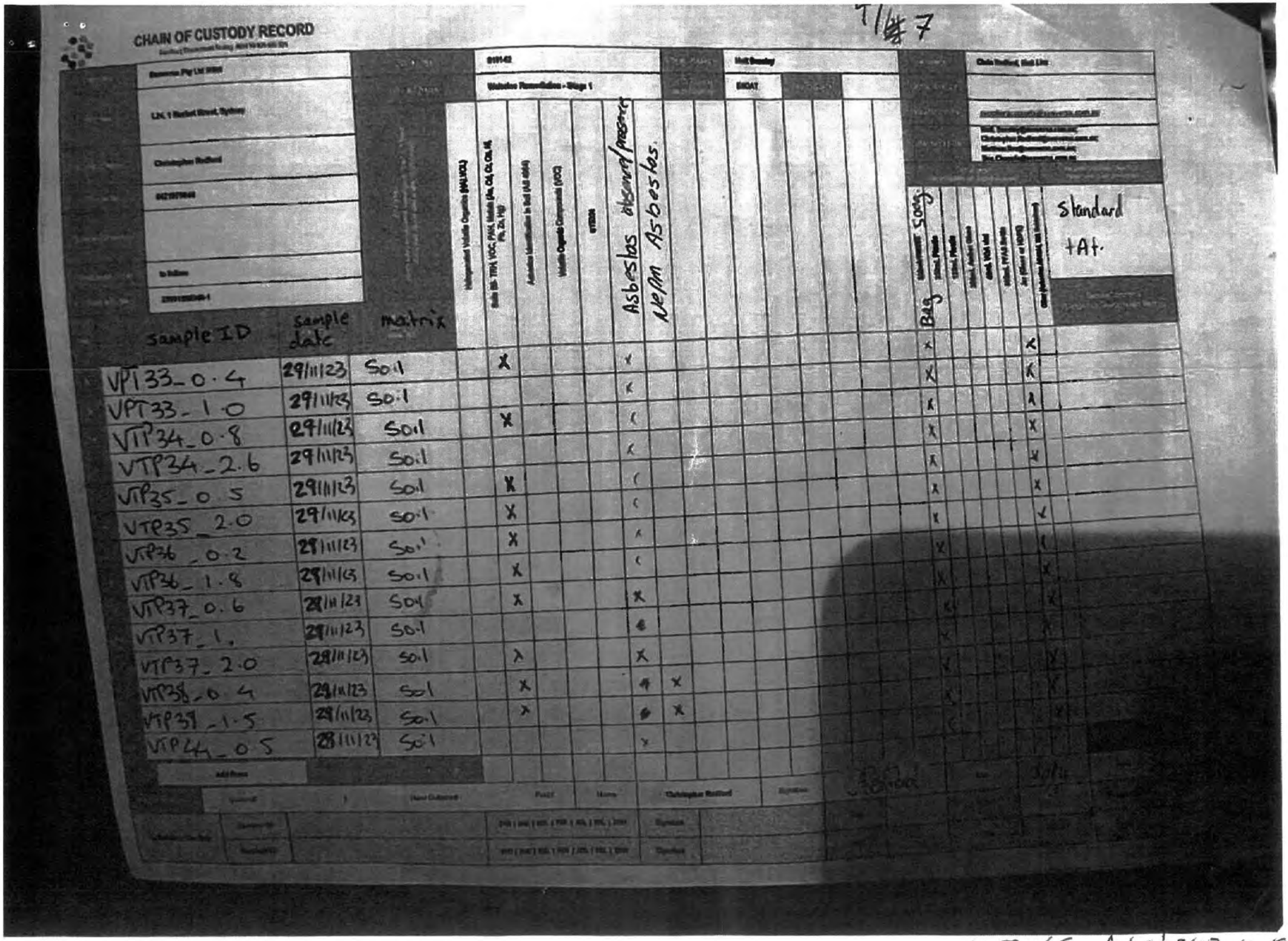
CHAIN OF CUSTODY RECORD

3/3 7

Asbestos absence presence
repm Asbestos

standard tat

| | | |



CHAIN OF CUSTODY RECORD

T1#7

Sample ID	Sample date	matrix	Asbestos observed/present Nepm Asbestos.	Bag	Standard TAT.
VP133_0.4	29/11/23	Soil	X	X	
VPT33_1.0	29/11/23	Soil	X	X	
VTP34_0.8	29/11/23	Soil	X	X	
VTP34_2.6	29/11/23	Soil	X	X	
VTP35_0.5	29/11/23	Soil	X	X	
VTP35_2.0	29/11/23	Soil	X	X	
VTP36_0.2	29/11/23	Soil	X	X	
VTP36_1.8	29/11/23	Soil	X	X	
VTP37_0.6	29/11/23	Soil	X	X	
VTP37_1.0	29/11/23	Soil	X	X	
VTP37_2.0	29/11/23	Soil	X	X	
VTP38_0.4	29/11/23	Soil	X	X	
VTP39_1.5	29/11/23	Soil	X	X	
VTP44_0.5	28/11/23	Soil	X	X	

1050859

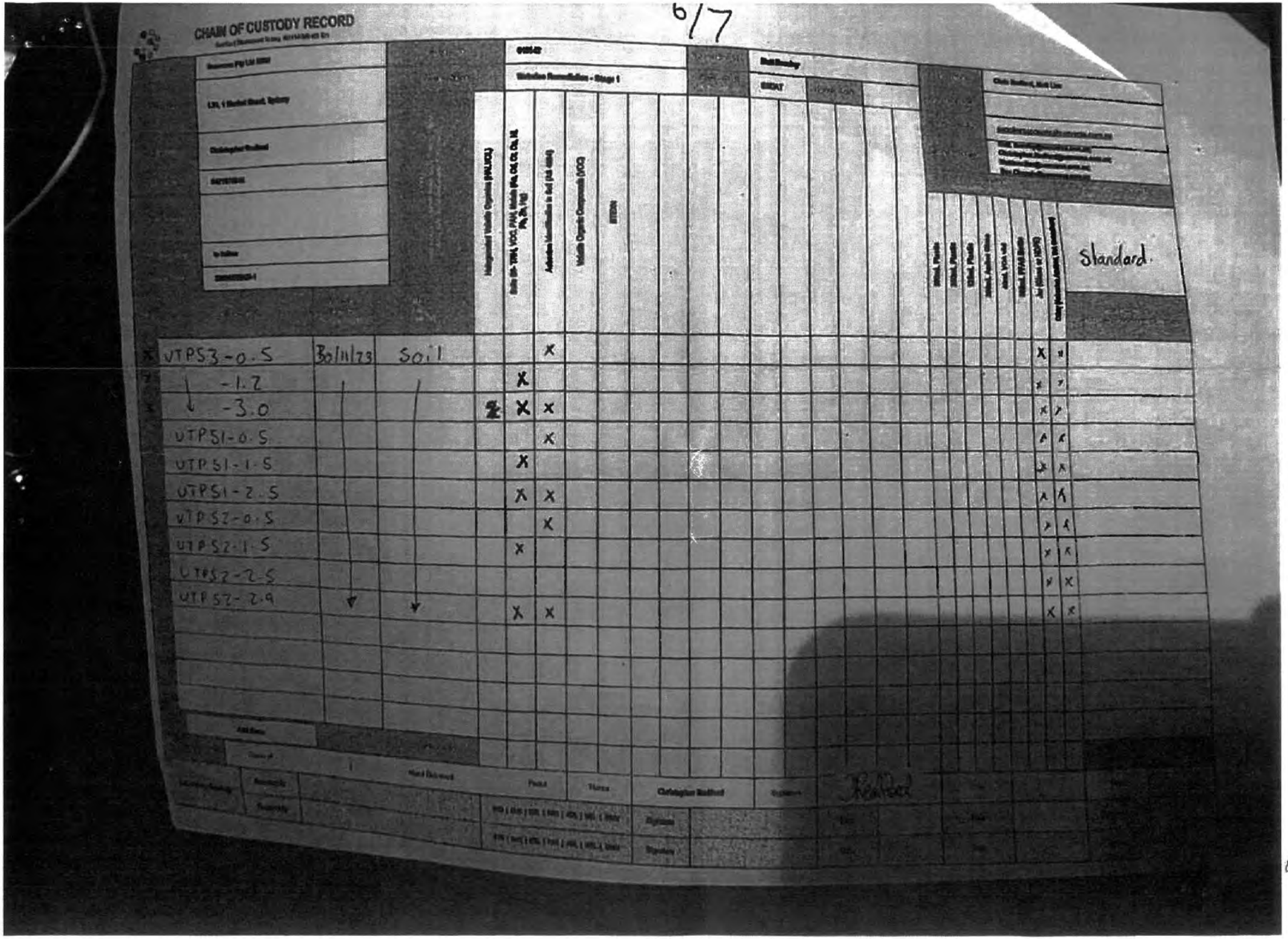
Ashid 8/12 11:45

CHAIN OF CUSTODY RECORD

317

standard tat.

| | | |


CHAIN OF CUSTODY RECORD
6/7
Standard.
VTPS3-0.5
30/11/23
Soil
-1.7
-3.0
VTPS1-0.5
VTPS1-1.5
VTPS1-2.5
VTPS2-0.5
VTPS2-1.5
VTPS2-2.5
VTPS2-2.9
Christopher Rodford
Asbid
8/12
1445

7/7

CHAIN OF CUSTODY RECORD

| | | |

FW: Eurofins Sample Receipt Advice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

Hannah Mawbey <HannahMawbey@eurofins.com>
Thu 2023-12-07 2:49 PM
To:#AU25_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>;Ryan Phillips <RyanPhillips@eurofins.com>
Cc:Ursula Long <UrsulaLong@eurofins.com>;Brenda Hong <BrendaHong@eurofins.com>

INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

Hi Team,

Please see below email from client regarding SRA for report 1050869 and please action:

Sample QC212 not received. Received sample QC112 duplex labelled with QC112_FD, QC112_ILD. Logged as QC112_FD as QC112 & QC112_ILD as QC112 DUP. -SRA note

PLEASE KEEP ONE AS QC112 for you guys and send the other to ALS as QC212.- Matthew Linz comment-please action

Kind Regards,
Hannah Mawbey
Analytical Services Manager

Eurofins|Environment Testing
Unit 16/7 Investigator Dr
Unanderra NSW 2526
AUSTRALIA

Phone : +61 2 9900 8492
Mobile : +61 447 584 487

Email : HannahMawbey@eurofins.com
Website: www.eurofins.com.au/environmental-testing

-

From: Matthew Linz <Matthew.Linz@senversa.com.au>
Sent: Thursday, 7 December 2023 2:26 PM
To: Hannah Mawbey <HannahMawbey@eurofins.com>
Subject: Re: Eurofins Sample Receipt Advice - Report 1050869 : Site WATERLOO REMEDIATION - STAGE 1 (S19142)

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hey Hannah.

Sample QC211, QC213,QC214 (Jars only) forwarded to ALS.

PEFECT

Ashid 8/12, IMS

-

QC112 & QC112_ILD as QC112 DUP.

PLEASE KEEP ONE AS QC112 for you guys and send the other to ALS as QC212.

Please advise. Received sample VTP45_0.6 labelled with VTP45_0.5, VTP43_1.8 Labelled with VTP43_2.0, VTP30_0.5 as VTP32_0.5, VTP30_1.5 as VTP32_1.5, VTP30_2.5 as VTP32_2.5. Logged as per COC. Extra sample VTP55_UNKNOWN received. Logged on hold.

These edits are perfect

Thanks

Kind Regards,
Hannah Mawbey

Eurofins | Environment Testing
Unit 16/7 Investigator Dr
Unanderra NSW 2526
AUSTRALIA

Phone : +61 2 9900 8492
Mobile : +61 447 584 487

View our latest EnviroNotes



senversa

Matthew Linz
Senior Environmental Scientist

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E: **Matthew.Linz@senversa.com.au**

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Senversa acknowledges the traditional custodians of the lands and waters upon which we conduct our work, and pay our respect to the elders, past, present and those to come.



April 8/12
CCFS

CERTIFICATE OF ANALYSIS

Work Order	: **ES2403499**	Page	: 1 of 9
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Lawrence drycleaners stage 2 SB's	Date Samples Received	: 05-Feb-2024 10:30
Order number	: ----	Date Analysis Commenced	: 05-Feb-2024
C-O-C number	: ----	Issue Date	: 08-Feb-2024 18:54
Sampler	: MATT LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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
- 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*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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 Contract 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.

- 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.
- EP080: 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, 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC235	QC234	----	----	----
			Sampling date / time	01-Feb-2024 00:00	01-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2403499-001	ES2403499-002	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**8.9**	**16.6**	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	**10**	**3**	----	----	----
Copper	7440-50-8	5	mg/kg	**16**	**7**	----	----	----
Lead	7439-92-1	5	mg/kg	**33**	<5	----	----	----
Nickel	7440-02-0	2	mg/kg	**5**	<2	----	----	----
Zinc	7440-66-6	5	mg/kg	**46**	**6**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	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								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC235	QC234	----	----	----
			Sampling date / time	01-Feb-2024 00:00	01-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2403499-001	ES2403499-002	--------	--------	--------
				Result	Result	----	----	----
EP074C: Sulfonated Compounds - Continued								
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	01-Feb-2024 00:00	01-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2403499-001	ES2403499-002	--------	--------	--------
					Result	Result	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
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	----	----	----
Hexachlorobutadiene	87-68-3	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	----	----	----
1.3-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	----	----	----
1.2.4-Trichlorobenzene	120-82-1	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)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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	01-Feb-2024 00:00	01-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2403499-001	ES2403499-002	--------	--------	--------
					Result	Result	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
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**	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC235	QC234	----	----	----
			Sampling date / time	01-Feb-2024 00:00	01-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2403499-001	ES2403499-002	--------	--------	--------
				Result	Result	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ **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	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	**101**	**96.9**	----	----	----
Toluene-D8	2037-26-5	0.5	%	**110**	**108**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	**111**	**105**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**95.2**	**92.8**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**95.6**	**99.6**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**74.4**	**100**	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**88.6**	**92.3**	----	----	----
Anthracene-d10	1719-06-8	0.5	%	**103**	**111**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	01-Feb-2024 00:00	01-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2403499-001	ES2403499-002	--------	--------	--------
					Result	Result	----	----	----
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		**108**	**111**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**84.8**	**81.9**	**----**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**80.2**	**79.2**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**91.6**	**85.9**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2403499**	Page	: 1 of 12
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Lawrence drycleaners stage 2 SB's	Date Samples Received	: 05-Feb-2024
Order number	: ----	Date Analysis Commenced	: 05-Feb-2024
C-O-C number	: ----	Issue Date	: 08-Feb-2024
Sampler	: MATT LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 5582810)									
ES2403453-015	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	4	5	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	12	14	15.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	31	41	25.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	61	76	22.7	0% - 50%
ES2403436-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	24	22	11.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	6	6	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	24	22	7.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	15	14	11.7	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5582817)									
ES2403499-002	QC234	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	3	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	7	10	34.7	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<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 (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5582817) - continued									
ES2403499-002	QC234	EG005T: Zinc	7440-66-6	5	mg/kg	6	<5	0.0	No Limit
ES2403554-012	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	33	27	19.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	7	4	53.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	8	58.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	19	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	52	48	6.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5582819)									
ES2403453-022	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	10.0	9.8	2.1	0% - 50%
ES2403554-009	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	<1.0	<1.0	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5582816)									
ES2403453-018	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2403554-003	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5580622)									
ES2403499-001	QC235	EP074: Styrene	100-42-5	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: 5580622)									
ES2403499-001	QC235	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: 5580622)									
ES2403499-001	QC235	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5580622)									
ES2403499-001	QC235	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

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 (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 5580622)									
ES2403499-001	QC235	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: Hexachlorobutadiene	87-68-3	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: 5580622)									
ES2403499-001	QC235	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: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	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

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 (%)
EP074G: Trihalomethanes (QC Lot: 5580622)									
ES2403499-001	QC235	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: 5580886)									
ES2403499-001	QC235	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5580623)									
ES2403499-001	QC235	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5580887)									
ES2403499-001	QC235	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5580623)									
ES2403499-001	QC235	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: 5580887)									
ES2403499-001	QC235	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

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: 5580623)									
ES2403499-001	QC235	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

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: 5582810)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	106	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	93.8	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	122	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	105	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	100	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	104	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	95.2	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5582817)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	107	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	82.8	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	130	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	108	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	107	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	111	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	97.7	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5582816)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	105	70.0	125
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5580622)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	90.8	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	92.6	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	92.4	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	92.1	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	90.7	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	91.8	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	90.9	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	91.0	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	91.7	59.0	125
EP074B: Oxygenated Compounds (QCLot: 5580622)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	96.5	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	88.8	58.0	136

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
EP074B: Oxygenated Compounds (QCLot: 5580622) - continued								
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	99.4	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	89.6	54.0	136
EP074C: Sulfonated Compounds (QCLot: 5580622)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	88.9	54.0	126
EP074D: Fumigants (QCLot: 5580622)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	91.8	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	94.6	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	93.9	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	95.1	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	96.4	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 5580622)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	88.0	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	91.8	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	89.9	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	92.2	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	91.5	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	90.8	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	92.3	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	89.0	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	92.5	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	93.9	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	93.8	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	91.3	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	91.8	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	88.9	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	98.0	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	92.7	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	96.6	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	97.0	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	97.8	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	92.2	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	93.9	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	99.8	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	97.1	55.0	129

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
EP074E: Halogenated Aliphatic Compounds (QCLot: 5580622) - continued								
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	99.1	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	101	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	92.1	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	98.7	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	96.7	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 5580622)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	93.4	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	93.3	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	92.6	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	93.0	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	92.0	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	95.2	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	94.5	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	96.3	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	97.1	52.0	122
EP074G: Trihalomethanes (QCLot: 5580622)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	95.8	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	94.1	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	93.2	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	96.6	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5580886)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	96.3	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	98.6	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.1	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	95.5	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	98.4	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	103	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	101	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	95.2	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	97.5	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	97.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	103	74.0	126

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5580886) - continued								
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	98.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	94.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	95.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5580623)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	99.7	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5580887)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	104	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	106	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	108	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5580623)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	93.2	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5580887)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	116	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	105	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	110	63.0	131
EP080: BTEXN (QCLot: 5580623)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	87.7	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	82.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	85.8	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	87.7	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	87.8	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	84.1	78.8	122

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: 5582810)							
ES2403436-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.0	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	82.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	88.0	68.0	132

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5582810) - continued							
ES2403436-001	Anonymous	EG005T: Copper	7440-50-8	250 mg/kg	97.2	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	84.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	74.8	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	79.2	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5582817)							
ES2403499-002	QC234	EG005T: Arsenic	7440-38-2	50 mg/kg	104	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	100	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	96.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	104	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	102	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	104	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5582816)							
ES2403453-018	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	103	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5580622)							
ES2403499-001	QC235	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	90.3	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	99.2	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 5580622)							
ES2403499-001	QC235	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	97.4	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5580886)							
ES2403499-001	QC235	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	91.8	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	100	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5580623)							
ES2403499-001	QC235	EP080: C6 - C9 Fraction	----	32.5 mg/kg	81.8	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5580887)							
ES2403499-001	QC235	EP071: C10 - C14 Fraction	----	480 mg/kg	90.5	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	54.0	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	99.6	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5580623)							
ES2403499-001	QC235	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	83.2	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5580887)							
ES2403499-001	QC235	EP071: >C10 - C16 Fraction	----	860 mg/kg	82.1	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	69.6	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	74.8	52.0	132
EP080: BTEXN (QCLot: 5580623)							
ES2403499-001	QC235						

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: 5580623) - continued							
ES2403499-001	QC235	EP080: Benzene	71-43-2	2.5 mg/kg	85.3	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	84.0	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	85.2	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	86.9	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.1	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.9	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2403499**	Page	: 1 of 5
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Telephone	: +61-2-8784 8555
Project	: S19142 Lawrence drycleaners stage 2 SB's	Date Samples Received	: 05-Feb-2024
Site	: ----	Issue Date	: 08-Feb-2024
Sampler	: MATT LINZ	No. of samples received	: 2
Order number	: ----	No. of samples analysed	: 2

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.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

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
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
QC235, QC234	**01-Feb-2024**	**----**	----	----	**06-Feb-2024**	15-Feb-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
QC235, QC234	**01-Feb-2024**	**06-Feb-2024**	30-Jul-2024	✓	**06-Feb-2024**	30-Jul-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
QC235, QC234	**01-Feb-2024**	**06-Feb-2024**	29-Feb-2024	✓	**07-Feb-2024**	29-Feb-2024	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074)							
QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074)							
QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓

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
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074) QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074) QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QC235	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**05-Feb-2024**	08-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP074) QC234	**01-Feb-2024**	**05-Feb-2024**	08-Feb-2024	✓	**06-Feb-2024**	08-Feb-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC235, QC234	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**07-Feb-2024**	16-Mar-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QC235	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**05-Feb-2024**	15-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP080) QC235, QC234	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**06-Feb-2024**	15-Feb-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QC235	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**05-Feb-2024**	15-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP080) QC235, QC234	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**06-Feb-2024**	15-Feb-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC235	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**05-Feb-2024**	15-Feb-2024	✓
Soil Glass Jar - Unpreserved (EP080) QC234	**01-Feb-2024**	**05-Feb-2024**	15-Feb-2024	✓	**06-Feb-2024**	15-Feb-2024	✓

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)							
Moisture Content	EA055	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	2	**50.00**	**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	4	33	**12.12**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	2	**50.00**	**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	2	33	**6.06**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	2	**50.00**	**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	2	33	**6.06**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	2	**50.00**	**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	2	33	**6.06**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**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
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).
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)
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)
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).
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.

Preparation Methods	Method	Matrix	Method Descriptions
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.

senversa

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ABN 89 132 231 380

Chain of Custody Documentation

Laboratory: ALS NSW
Address:
Contact: Sample Receipt
Phone:

Job Number:	S19142	Purchase Order:	
Project Name:	Lawrence drycleaners stage 2 SB's	Quote No:	230515Senn-1
Sampled By:	Matt Linz	Turn Around Time:	3 day TAT
Project Manager:	MB	Page:	1 of 1
Email Report To:	Matt.Beasley@senversa.com.au; Matthew.linz@senversa.com; Bec.chapple@senversa.com.au	Phone/Mobile:	435895069

Sample Information					Container Information		Analysis Required													
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles	Asbestos 500 mL NEPM	Suit B8	TCLP B(a)P	TCLP Lead	TOC VOC	VOC	Btexn	ASLP VOC zero head space DI			HOLD	Comments: e.g. Highly contaminated sample, hazardous materials present; trace LORs etc.
1	QC235	Soil	1/02/2024	-	jar	1		x										trip
2	QC234	Soil	1/02/2024	-	jar	1		x										trip
																		B10A = 8 metals, TRH, BTEX
																		TB
																		TS
Total						1												

Environmental Division
Sydney
Work Order Reference
ES2403499

Telephone : +61-2-8784 8555

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: Matthew Linz | Signature: | Date: 1/02/2024

Relinquished By: Matthew Linz		Method of Shipment (if applicable):	Received by:	
Name/Signature:	1/02/2024	Carrier / Reference #:	Name/Signature:	Date: 5/2/24
Of:	Time: 7:58	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

CERTIFICATE OF ANALYSIS

Work Order	: **EN2401547**	Page	: 1 of 5
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Newcastle
Contact	: MATT BEASLEY	Contact	:
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: S19142 - JEFFMAN WATERLOO REMEDIATION	Date Samples Received	: 21-Feb-2024 14:36
Order number	: ----	Date Analysis Commenced	: 22-Feb-2024
C-O-C number	: ----	Issue Date	: 27-Feb-2024 17:18
Sampler	: BEC CHAPPLE, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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
- 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*
Dale Semple	Analyst	Newcastle - Organics, Mayfield West, NSW
Dale Semple	Analyst	Newcastle, Mayfield West, NSW

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 Contract 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.

- CAN-001: Results for Pressure - As Received are measured under controlled conditions using calibrated laboratory gauges. These results are expressed as an absolute pressure. Equivalent gauge pressures may be calculated by subtracting the Pressure - Laboratory Atmosphere.
- CAN-001: Results for Pressure - Gauge As Received are obtained from uncalibrated field gauges and are indicative only. These results may not precisely match calibrated gauge readings and may vary from field measurements due to changes in temperature and pressure.
- CAN-001: Results for Vacuum - As Received are calculated from the pressures of the canister and laboratory atmosphere at the time of receipt, and are expressed as a measure of the vacuum remaining. A positive value indicates that the canister was below atmospheric pressure upon receipt.
- EP101: Results reported in mg/m³ are calculated from PPBV results based on a temperature of 25°C and atmospheric pressure of 101.3 kPa.

Analytical Results

Sub-Matrix: SOIL GAS (Matrix: AIR)			Sample ID	C12388_S203	C12419_S013	----	----	----
			Sampling date / time	16-Feb-2024 00:00	16-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EN2401547-001	EN2401547-002	--------	--------	--------
				Result	Result	----	----	----
EP101: VOCs by USEPA Method TO15 (Calculated Concentration)								
Vinyl chloride	75-01-4	0.0051	mg/m³	<0.0051	<0.0051	----	----	----
Chloroethane	75-00-3	0.130	mg/m³	<0.130	<0.130	----	----	----
1.1-Dichloroethene	75-35-4	0.200	mg/m³	<0.200	<0.200	----	----	----
1.1-Dichloroethane	75-34-3	0.200	mg/m³	<0.200	<0.200	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.0200	mg/m³	<0.0200	<0.0200	----	----	----
1.2-Dichloroethane	107-06-2	0.200	mg/m³	<0.200	<0.200	----	----	----
1.1.1-Trichloroethane	71-55-6	0.270	mg/m³	<0.270	<0.270	----	----	----
Trichloroethene	79-01-6	0.0054	mg/m³	**0.0301**	<0.0054	----	----	----
1.1.2-Trichloroethane	79-00-5	0.270	mg/m³	<0.270	<0.270	----	----	----
Tetrachloroethene	127-18-4	0.340	mg/m³	**7.66**	<0.340	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.200	mg/m³	<0.200	<0.200	----	----	----
Isopropyl Alcohol	67-63-0	0.120	mg/m³	<0.120	<0.120	----	----	----
EP101: VOCs by USEPA Method TO15r								
Vinyl chloride	75-01-4	0.0020	ppmv	<0.0020	<0.0020	----	----	----
Chloroethane	75-00-3	0.0500	ppmv	<0.0500	<0.0500	----	----	----
1.1-Dichloroethene	75-35-4	0.0500	ppmv	<0.0500	<0.0500	----	----	----
1.1-Dichloroethane	75-34-3	0.0500	ppmv	<0.0500	<0.0500	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.0050	ppmv	<0.0050	<0.0050	----	----	----
1.2-Dichloroethane	107-06-2	0.0500	ppmv	<0.0500	<0.0500	----	----	----
1.1.1-Trichloroethane	71-55-6	0.0500	ppmv	<0.0500	<0.0500	----	----	----
Trichloroethene	79-01-6	0.0010	ppmv	**0.0056**	<0.0010	----	----	----
1.1.2-Trichloroethane	79-00-5	0.0500	ppmv	<0.0500	<0.0500	----	----	----
Tetrachloroethene	127-18-4	0.0500	ppmv	**1.13**	<0.0500	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.0500	ppmv	<0.0500	<0.0500	----	----	----
Isopropyl Alcohol	67-63-0	0.0500	ppmv	<0.0500	<0.0500	----	----	----
Sampling Quality Assurance								
Pressure - As received	PRESSURE	0.1	kPaa	**79.8**	**97.1**	----	----	----

Analytical Results

Sub-Matrix: SOIL GAS (Matrix: AIR)				Sample ID	C12388_S203	C12419_S013	----	----	----
				Sampling date / time	16-Feb-2024 00:00	16-Feb-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EN2401547-001	EN2401547-002	--------	--------	--------
					Result	Result	----	----	----
Sampling Quality Assurance - Continued									
Pressure - Laboratory Atmosphere	----	0.1	kPaa		**99.9**	**99.9**	**----**	**----**	**----**
Temperature as Received	----	0.1	°C		**21.0**	**21.0**	**----**	**----**	**----**
Vacuum - As received	----	0.03	Inches Hg		**5.96**	**0.83**	**----**	**----**	**----**
USEPA Air Toxics Method TO15r Surrogates									
4-Bromofluorobenzene	460-00-4	0.5	%		**103**	**99.7**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL GAS		Recovery Limits (%)	
Compound	CAS Number	Low	High
USEPA Air Toxics Method TO15r Surrogates			
4-Bromofluorobenzene	460-00-4	60	140

QUALITY CONTROL REPORT

Work Order	: **EN2401547**	Page	: 1 of 3
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Newcastle
Contact	: MATT BEASLEY	Contact	:
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: S19142 - JEFFMAN WATERLOO REMEDIATION	Date Samples Received	: 21-Feb-2024
Order number	: ----	Date Analysis Commenced	: 22-Feb-2024
C-O-C number	: ----	Issue Date	: 27-Feb-2024
Sampler	: BEC CHAPPLE, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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*
Dale Semple	Analyst	Newcastle - Organics, Mayfield West, NSW
Dale Semple	Analyst	Newcastle, Mayfield West, NSW

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: **AIR**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP101: VOCs by USEPA Method TO15r (QC Lot: 5623435)									
EN2401547-001	C12388_S203	EP101-15X: Vinyl chloride	75-01-4	0.5 (2.0)*	ppbv	<0.0020 ppmv	<2.0	0.0	No Limit
		EP101-15X: Chloroethane	75-00-3	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: 1.1-Dichloroethene	75-35-4	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: 1.1-Dichloroethane	75-34-3	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: cis-1.2-Dichloroethene	156-59-2	0.5 (5.0)*	ppbv	<0.0050 ppmv	<5.0	0.0	No Limit
		EP101-15X: 1.2-Dichloroethane	107-06-2	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: 1.1.1-Trichloroethane	71-55-6	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: Trichloroethene	79-01-6	0.5 (1.0)*	ppbv	0.0056 ppmv	5.6	0.0	No Limit
		EP101-15X: 1.1.2-Trichloroethane	79-00-5	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: Tetrachloroethene	127-18-4	0.5 (50.0)*	ppbv	1.13 ppmv	1100	2.6	0% - 20%
		EP101-15X: trans-1.2-Dichloroethene	156-60-5	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: Isopropyl Alcohol	67-63-0	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	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: **AIR**

				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
EP101: VOCs by USEPA Method TO15r (QCLot: 5623435)								
EP101-15X: Vinyl chloride	75-01-4	0.5	ppbv	<0.5	10 ppbv	105	82.0	120
EP101-15X: Chloroethane	75-00-3	0.5	ppbv	<0.5	10 ppbv	105	84.2	118
EP101-15X: 1.1-Dichloroethene	75-35-4	0.5	ppbv	<0.5	10 ppbv	104	87.1	115
EP101-15X: 1.1-Dichloroethane	75-34-3	0.5	ppbv	<0.5	10 ppbv	103	85.1	116
EP101-15X: cis-1.2-Dichloroethene	156-59-2	0.5	ppbv	<0.5	10 ppbv	101	83.7	119
EP101-15X: 1.2-Dichloroethane	107-06-2	0.5	ppbv	<0.5	10 ppbv	102	81.7	117
EP101-15X: 1.1.1-Trichloroethane	71-55-6	0.5	ppbv	<0.5	10 ppbv	99.8	82.8	116
EP101-15X: Trichloroethene	79-01-6	0.5	ppbv	<0.5	10 ppbv	101	85.1	113
EP101-15X: 1.1.2-Trichloroethane	79-00-5	0.5	ppbv	<0.5	10 ppbv	105	87.5	116
EP101-15X: Tetrachloroethene	127-18-4	0.5	ppbv	<0.5	10 ppbv	99.4	75.7	126
EP101-15X: trans-1.2-Dichloroethene	156-60-5	0.5	ppbv	<0.5	10 ppbv	102	82.9	115
EP101-15X: Isopropyl Alcohol	67-63-0	0.5	ppbv	<0.5	10 ppbv	94.6	70.0	128

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.

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

QUALITY CONTROL REPORT

Work Order	: **EN2401547**	Page	: 1 of 3
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Newcastle
Contact	: MATT BEASLEY	Contact	:
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: S19142 - JEFFMAN WATERLOO REMEDIATION	Date Samples Received	: 21-Feb-2024
Order number	: ----	Date Analysis Commenced	: 22-Feb-2024
C-O-C number	: ----	Issue Date	: 27-Feb-2024
Sampler	: BEC CHAPPLE, MATTHEW LINZ		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report ; Recovery and Acceptance Limits
- Matrix Spike (MS) and Matrix Spike Duplicate (MSD) 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*
Dale Semple	Analyst	Newcastle - Organics, Mayfield West, NSW
Dale Semple	Analyst	Newcastle, Mayfield West, NSW

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.

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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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: **AIR**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP101: VOCs by USEPA Method TO15r (QC Lot: 5623435)									
EN2401547-001	C12388_S203	EP101-15X: Vinyl chloride	75-01-4	0.5 (2.0)*	ppbv	<0.0020 ppmv	<2.0	0.0	No Limit
		EP101-15X: Chloroethane	75-00-3	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: 1.1-Dichloroethene	75-35-4	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: 1.1-Dichloroethane	75-34-3	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: cis-1.2-Dichloroethene	156-59-2	0.5 (5.0)*	ppbv	<0.0050 ppmv	<5.0	0.0	No Limit
		EP101-15X: 1.2-Dichloroethane	107-06-2	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: 1.1.1-Trichloroethane	71-55-6	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: Trichloroethene	79-01-6	0.5 (1.0)*	ppbv	0.0056 ppmv	5.6	0.0	No Limit
		EP101-15X: 1.1.2-Trichloroethane	79-00-5	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: Tetrachloroethene	127-18-4	0.5 (50.0)*	ppbv	1.13 ppmv	1100	2.6	0% - 20%
		EP101-15X: trans-1.2-Dichloroethene	156-60-5	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit
		EP101-15X: Isopropyl Alcohol	67-63-0	0.5 (50.0)*	ppbv	<0.0500 ppmv	<50.0	0.0	No Limit

Method Blank (MB), Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (DCS) 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 terms Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (DCS) refers to certified reference materials, or known interference free matrices spiked with target analytes. The purpose of these QC parameters are to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS and DCS.

Sub-Matrix: **AIR**

		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EP101: VOCs by USEPA Method TO15r (QCLot: 5623435)											
EP101-15X: Vinyl chloride	75-01-4	0.5	ppbv	<0.5	10 ppbv	105	104	82.0	120	20	----
EP101-15X: Chloroethane	75-00-3	0.5	ppbv	<0.5	10 ppbv	105	104	84.2	118	20	----
EP101-15X: 1.1-Dichloroethene	75-35-4	0.5	ppbv	<0.5	10 ppbv	104	103	87.1	115	20	----
EP101-15X: 1.1-Dichloroethane	75-34-3	0.5	ppbv	<0.5	10 ppbv	103	102	85.1	116	20	----
EP101-15X: cis-1.2-Dichloroethene	156-59-2	0.5	ppbv	<0.5	10 ppbv	101	100	83.7	119	20	----
EP101-15X: 1.2-Dichloroethane	107-06-2	0.5	ppbv	<0.5	10 ppbv	102	101	81.7	117	20	----
EP101-15X: 1.1.1-Trichloroethane	71-55-6	0.5	ppbv	<0.5	10 ppbv	99.8	98.7	82.8	116	20	----
EP101-15X: Trichloroethene	79-01-6	0.5	ppbv	<0.5	10 ppbv	101	100	85.1	113	20	----
EP101-15X: 1.1.2-Trichloroethane	79-00-5	0.5	ppbv	<0.5	10 ppbv	105	105	87.5	116	20	----
EP101-15X: Tetrachloroethene	127-18-4	0.5	ppbv	<0.5	10 ppbv	99.4	98.6	75.7	126	20	----
EP101-15X: trans-1.2-Dichloroethene	156-60-5	0.5	ppbv	<0.5	10 ppbv	102	102	82.9	115	20	----
EP101-15X: Isopropyl Alcohol	67-63-0	0.5	ppbv	<0.5	10 ppbv	94.6	95.7	70.0	128	20	----

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

AIR CANISTER CHAIN OF CUSTODY

ALS

If sourced from an ALS Laboratory: please tick →

Client Supplied Canister(s)? No

CLIENT:	Senversa
OFFICE:	Sydney
PROJECT:	S19142 - Jellinbah Waterloo Rd
PROJECT NO:	S19142
CANISTER REQUEST NO:	
PURCHASE ORDER NO.:	PO 0021582
PROJECT MANAGER:	Matt Beasley
CONTACT PH:	0421 436 097
SAMPLER:	Christopher Radford, Matt Linz, Bec Chapple
SAMPLER MOBILE:	0421 978 988
COC Emailed to ALS?	(YES) / NO)
EDD FORMAT:	Default + ESDAT
Email Reports to:	Christopher.Radford@senversa.com.au, Bec.Chapple@senversa.com.au, Matt.Beasley@senversa.com.au, Matthew.Linz@senversa.com.au
Email Invoice to:	supplieraccounts@senversa.com.au

TURNAROUND REQUIREMENTS: ☒ Standard TAT (List due date):

(Standard TAT may be extended for multiple concentrated analysis advice)

● Non Standard or urgent TAT (List due date):

ALS QUOTE NO.:

COUNTRY OF ORIGIN: Australia

COC SEQUENCE (if multiple COCs) (Circle)

COC: 1 2 3 4 5 6 7

CoC: 1 2 3 4 5 6 7

RELINQUISHED BY: Bec Chapple

RECEIVED BY:

DATE/TIME: 21-2-24

COMMENTS/SPECIAL HANDLING/REPLACEMENT OR RETURN INSTRUCTIONS:

GAS SAMPLE CONTAINER INFORMATION

Container ID	CANISTER / SAMPLE DETAILS					Canister Gauge Pressures (PSI)		Reporting Requirements					ANALYSES REQUIRED	
								LORs			Units			
LAB ID	CANISTER SERIAL NO.	FLOW CONTROLLER SERIAL NO.	CLIENT SAMPLE ID	DATE / TIME SAMPLED	MATRIX (eg Air, Soil Gas)	Pre-Sampling	Post Sampling	Ambient Air	Soil Gas (SVI)	Indoor / Ambient	ppbv, ug/m3	ppmv, mg/m3	TO-15 (VOC) modified EP101-D-05	Isobutane/ Acetone (IFA)
12388	283		SV27	16/2/24	Air	-30			X			X	X	X
12419	013		SV12	16/2/24	Air	-30			X			X	X	X

Special Instructions:

Environmental Division
Newcastle
Work Order Reference
EN2401547

Telephone : +61 2 4014 2500

* Matt. Beasley
* Matthew. Linz @ Senversa. com. au
* Christopher - Redford
* Bec. Chapple

1/2.

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Chain of Custody Documentation

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: 519142
Project Name: Waterloo Remediation
Sampled By: RF
Project Manager: Matt Beasley
Email Report To: *

Purchase Order:
Quote No: 230515SENN
Turn Around Time:
Page: 1 of 1
Phone/Mobile: 0421978848

Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles	B8 + Iron (dissolved)	TN, TP, RP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alk					HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	IW806	water	15/12/23	AM	HP, HN, HSP, HUA, HVS	8											
	~~MW806~~ MW117					1											
	QC124																
	QC3																TB
	QC4																TS
Total																	

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: Rowen Faint | Signature: R Faint | Date: 15/12/23

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: matt linz	Date:	Carrier / Reference #:	Name/Signature:	Date: 15/12
Of: Senversa	Time:	Date/Time:	Of:	Time: 6:30
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

2-7

Completed by: _____
Checked by: _____

1055663

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

* Matthew. linz @ Senversa. com. au
* Christopher - Redford
* Bec. Chapple

Chain of Custody Documentation

1/1

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: S19142
Project Name: Waterloo Remediation
Sampled By: RF
Project Manager: Matt Beasley
Email Report To: *

Purchase Order:
Quote No: 230515SENN
Turn Around Time: Standard.
Page: 1 of 1
Phone/Mobile: 0421978848

Lab ID	Sample ID	Matrix *	Date	Time	Container Information: Type / Code	Container Information: Total Bottles	B8 + Iron (dissolved)	TN, TP, RP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alk	BTEX	VOCs				HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	1W806	water	15/12/23	AM	1xP, 1xN, 1xSC, 1xVA, 4xVS	8	x	x	x	x	x							
	~~MW117~~ MW117						x	x	x	x	x							
	QC124						x	x	x	x	x							
	QC322												x					TB
	QC422											x						TS
Total																		

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: Raven Faint
Signature: RFaint
Date: 15/12/23

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: matt linz	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of: Senversa	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	WATERLOO REMEDIATION
Project ID:	S19142
Turnaround time:	10 Day
Date/Time received	Dec 15, 2023 6:30 PM
Eurofins reference	1055663

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

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

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NATA# 1261
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NATA# 1261
Site# 18217

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Site# 20794

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NATA# 1261
Site# 25079 & 25289

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NZBN: 9429046024954

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Rolleston,
Christchurch 7675
+64 3 343 5201
IANZ# 1290

Tauranga
1277 Cameron Road,
Gate Pa,
Tauranga 3112
+64 9 525 0568
IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Order No.:
Report #: 1055663
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Dec 15, 2023 6:30 PM
Due: Jan 10, 2024
Priority: 10 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Ammonia-N	Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Phosphate total (as P)	Phosphorus reactive (as P)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEX	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C	Total Nitrogen
Melbourne Laboratory - NATA # 1261 Site # 1254													X								
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X		X	X	X	X	X	X	X	
Perth Laboratory - NATA # 2377 Site # 2370						X															X
External Laboratory																					
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																
1	IW806	Feb 15, 2023		Water	S23-De0046724	X	X	X	X	X	X	X	X	X		X	X		X	X	X
2	MW117	Feb 15, 2023		Water	S23-De0046725	X	X	X	X	X	X	X	X	X		X	X		X	X	X
3	QC124	Feb 15, 2023		Water	S23-De0046726	X	X	X	X	X	X	X	X	X		X	X		X	X	X
4	QC322 (TB)	Feb 15, 2023		Water	S23-De0046727										X						
5	QC422 (TS)	Feb 15, 2023		Water	S23-De0046728													X			
Test Counts						3	3	3	3	3	3	3	3	3	1	3	3	1	3	3	3

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1055663-W**
Project name WATERLOO REMEDIATION
Project ID S19142
Received Date Dec 15, 2023

Client Sample ID			[G01]IW806	[G01]MW117	[G01]QC124	QC322 (TB)
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S23-De0046724**	**S23-De0046725**	**S23-De0046726**	**S23-De0046727**
Date Sampled			**Feb 15, 2023**	**Feb 15, 2023**	**Feb 15, 2023**	**Feb 15, 2023**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.5	< 0.5	< 0.5	-
TRH C15-C28	0.1	mg/L	< 1	< 1	< 1	-
TRH C29-C36	0.1	mg/L	< 1	< 1	< 1	-
TRH C10-C36 (Total)	0.1	mg/L	< 1	< 1	< 1	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.5	< 0.5	< 0.5	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.5	< 0.5	< 0.5	-
TRH >C16-C34	0.1	mg/L	< 1	< 1	< 1	-
TRH >C34-C40	0.1	mg/L	< 1	< 1	< 1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 1	< 1	< 1	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			[G01]IW806	[G01]MW117	[G01]QC124	QC322 (TB)
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0046724	S23-De0046725	S23-De0046726	S23-De0046727
Date Sampled			Feb 15, 2023	Feb 15, 2023	Feb 15, 2023	Feb 15, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	61	62	61	61
Toluene-d8 (surr.)	1	%	56	58	54	57
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-

Client Sample ID			[G01]IW806	[G01]MW117	[G01]QC124	QC322 (TB)
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0046724	S23-De0046725	S23-De0046726	S23-De0046727
Date Sampled			Feb 15, 2023	Feb 15, 2023	Feb 15, 2023	Feb 15, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Fluorobiphenyl (surr.)	1	%	73	57	52	-
p-Terphenyl-d14 (surr.)	1	%	80	92	72	-
Ammonia-N	0.02	mg/L	25	6.6	7.5	-
Chloride	1	mg/L	32	19	30	-
Conductivity (at 25 °C)	10	uS/cm	660	490	1100	-
Dissolved Oxygen	0.1	mg/L	10.0	11	9.9	-
Nitrate-N	0.01	mg/L	< 0.01	5.1	< 0.01	-
Nitrite-N	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
NOx-N	0.01	mg/L	< 0.01	5.1	< 0.01	-
pH (at 25 °C)	0.1	pH Units	6.9	6.5	6.9	-
Phosphate total (as P)	0.01	mg/L	< 0.01	< 0.01	-0.00056	-
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
Redox Potential mV (relative to Ag/AgCl)	1	mV	410	420	410	-
Sulphate (as SO4)	2	mg/L	4.3	140	12	-
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	710	290	590	-
Total Kjeldahl Nitrogen	0.2	mg/L	26	7.9	7.6	-
Total Nitrogen	0.2	mg/L	26	13	7.6	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	61	27	99	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	600	38	640	-
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	600	38	640	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.001	< 0.001	0.001	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium (filtered)	0.001	mg/L	0.001	< 0.001	0.001	-
Copper (filtered)	0.001	mg/L	< 0.001	0.015	< 0.001	-
Iron (filtered)	0.05	mg/L	9.7	0.05	10.0	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel (filtered)	0.001	mg/L	0.002	< 0.001	0.002	-
Zinc (filtered)	0.005	mg/L	< 0.005	0.017	< 0.005	-
Alkali Metals						
Calcium	0.5	mg/L	89	65	88	-
Magnesium	0.5	mg/L	8.4	2.7	8.6	-
Potassium	0.5	mg/L	5.8	1.3	5.8	-
Sodium	0.5	mg/L	150	10	150	-

Client Sample ID			QC422 (TS)
Sample Matrix			**Water**
Eurofins Sample No.			**S23-De0046728**
Date Sampled			**Feb 15, 2023**
Test/Reference	LOR	Unit	
BTEX			
Benzene	1	%	120
Ethylbenzene	1	%	100
m&p-Xylenes	1	%	110
o-Xylene	1	%	95
Toluene	1	%	97
Xylenes - Total	1	%	99
4-Bromofluorobenzene (surr.)	1	%	72

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	Sydney	Jan 04, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 20, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 04, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Dec 20, 2023	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 04, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8 filtered	Sydney	Jan 09, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Ammonia-N	Welshpool	Dec 29, 2023	28 Days
- Method: ARL303 - Ammonia in Water by Discrete Analyser			
Nitrate-N	Welshpool	Jan 04, 2024	28 Days
- Method: ARL313/319 - NOx in Water by Discrete Analyser			
Nitrite-N	Welshpool	Jan 04, 2024	2 Days
- Method: ARL311 - Nitrite in Water by Discrete Analyser			
NOx-N	Welshpool	Dec 29, 2023	28 Days
- Method: ARL313/319 - NOx in Water by Discrete Analyser			
Total Kjeldahl Nitrogen	Welshpool	Jan 04, 2024	28 Day
- Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP			
Total Nitrogen	Welshpool	Dec 29, 2023	28 Days
- Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Sydney	Jan 04, 2024	28 Days
- Method: LTM-INO-4270 Anions by Ion Chromatography			
Sulphate (as SO4)	Sydney	Jan 04, 2024	28 Days
- Method: In-house method LTM-INO-4270 Sulphate by Ion Chromatograph			
Alkalinity (speciated)	Sydney	Jan 04, 2024	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Conductivity (at 25 °C)	Sydney	Jan 04, 2024	28 Days
- Method: LTM-INO-4030 Conductivity			
Dissolved Oxygen	Sydney	Jan 12, 2024	1 Days
- Method: LTM-INO-4130 Determination of Dissolved Oxygen using a DO meter			
pH (at 25 °C)	Sydney	Jan 04, 2024	0 Hour
- Method: LTM-GEN-7090 pH in water by ISE			
Phosphate total (as P)	Sydney	Jan 04, 2024	28 Days
- Method: E052 Total Phosphate (as P)			
Phosphorus reactive (as P)	Sydney	Jan 04, 2024	28 Days
- Method: E052 Reactive phosphate (as P)			
Redox Potential mV (relative to Ag/AgCl)	Melbourne	Dec 22, 2023	5 Days
- Method: APHA 2580B Redox Potential			
Total Suspended Solids Dried at 103 °C to 105 °C	Sydney	Jan 04, 2024	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Heavy Metals (filtered)	Sydney	Jan 04, 2024	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11C: Na/K/Ca/Mg	Sydney	Jan 04, 2024	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Sydney	Jan 04, 2024	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			

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

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1055663
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Dec 15, 2023 6:30 PM
Due: Jan 10, 2024
Priority: 10 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Ammonia-N	Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Phosphate total (as P)	Phosphorus reactive (as P)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEX	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C	Total Nitrogen
Melbourne Laboratory - NATA # 1261 Site # 1254													X								
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X		X	X	X	X	X	X	X	
Perth Laboratory - NATA # 2377 Site # 2370						X															X
External Laboratory																					
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																
1	IW806	Feb 15, 2023		Water	S23-De0046724	X	X	X	X	X	X	X	X	X		X	X		X	X	X
2	MW117	Feb 15, 2023		Water	S23-De0046725	X	X	X	X	X	X	X	X	X		X	X		X	X	X
3	QC124	Feb 15, 2023		Water	S23-De0046726	X	X	X	X	X	X	X	X	X		X	X		X	X	X
4	QC322 (TB)	Feb 15, 2023		Water	S23-De0046727										X						
5	QC422 (TS)	Feb 15, 2023		Water	S23-De0046728													X			
Test Counts						3	3	3	3	3	3	3	3	3	1	3	3	1	3	3	3

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Ammonia-N	mg/L	< 0.02			0.02	Pass	
Chloride	mg/L	< 1			1	Pass	
Conductivity (at 25 °C)	uS/cm	< 10			10	Pass	
Nitrate-N	mg/L	< 0.01			0.01	Pass	
Nitrite-N	mg/L	< 0.01			0.01	Pass	
NOx-N	mg/L	< 0.01			0.01	Pass	
Sulphate (as SO4)	mg/L	< 2			2	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 10			10	Pass	
Total Nitrogen	mg/L	< 0.2			0.2	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	98			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	79			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	103			70-130	Pass	
1.1.1-Trichloroethane	%	108			70-130	Pass	
1.2-Dichlorobenzene	%	129			70-130	Pass	
1.2-Dichloroethane	%	117			70-130	Pass	
Benzene	%	120			70-130	Pass	
Ethylbenzene	%	126			70-130	Pass	
m&p-Xylenes	%	118			70-130	Pass	
o-Xylene	%	117			70-130	Pass	
Toluene	%	118			70-130	Pass	
Trichloroethene	%	121			70-130	Pass	
Xylenes - Total*	%	118			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	112			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	113			70-130	Pass	
Acenaphthylene	%	117			70-130	Pass	
Anthracene	%	110			70-130	Pass	
Benz(a)anthracene	%	120			70-130	Pass	
Benzo(a)pyrene	%	118			70-130	Pass	
Benzo(b&j)fluoranthene	%	114			70-130	Pass	
Benzo(g.h.i)perylene	%	84			70-130	Pass	
Benzo(k)fluoranthene	%	112			70-130	Pass	
Chrysene	%	99			70-130	Pass	
Dibenz(a.h)anthracene	%	101			70-130	Pass	
Fluoranthene	%	87			70-130	Pass	
Fluorene	%	115			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	108			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
Phenanthrene	%	99			70-130	Pass	
Pyrene	%	96			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloride	%	96			70-130	Pass	
Conductivity (at 25 °C)	%	97			70-130	Pass	
Sulphate (as SO4)	%	98			70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	90			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	%	102			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	%	122			70-130	Pass	
Hydroxide Alkalinity (as CaCO3)	%	122			70-130	Pass	
Total Alkalinity (as CaCO3)	%	122			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	100			80-120	Pass	
Cadmium (filtered)	%	98			80-120	Pass	
Chromium (filtered)	%	98			80-120	Pass	
Copper (filtered)	%	98			80-120	Pass	
Iron (filtered)	%	92			80-120	Pass	
Lead (filtered)	%	97			80-120	Pass	
Mercury (filtered)	%	102			80-120	Pass	
Nickel (filtered)	%	98			80-120	Pass	
Zinc (filtered)	%	97			80-120	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	95			80-120	Pass	
Magnesium	%	101			80-120	Pass	
Potassium	%	101			80-120	Pass	
Sodium	%	103			80-120	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	N23-De0032013	NCP	%	102			70-130	Pass	
TRH C6-C10	N23-De0032013	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S23-De0035437	NCP	%	95			70-130	Pass	
1.1.1-Trichloroethane	S23-De0035437	NCP	%	81			70-130	Pass	
1.2-Dichlorobenzene	S23-De0035437	NCP	%	107			70-130	Pass	
1.2-Dichloroethane	S23-De0035437	NCP	%	91			70-130	Pass	
Benzene	N23-De0032013	NCP	%	123			70-130	Pass	
Ethylbenzene	N23-De0032013	NCP	%	113			70-130	Pass	
m&p-Xylenes	N23-De0032013	NCP	%	110			70-130	Pass	
o-Xylene	N23-De0032013	NCP	%	110			70-130	Pass	
Toluene	N23-De0032013	NCP	%	118			70-130	Pass	
Trichloroethene	S23-De0035437	NCP	%	85			70-130	Pass	
Xylenes - Total*	N23-De0032013	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	N23-De0032013	NCP	%	92			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia-N	L23-De0052557	NCP	%	88			80-120	Pass	
Chloride	S23-De0053256	NCP	%	99			70-130	Pass	
Sulphate (as SO4)	S23-De0053256	NCP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Suspended Solids Dried at 103 °C to 105 °C	S24-Ja0002007	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S23-De0053236	NCP	%	95			75-125	Pass	
Cadmium (filtered)	S23-De0053236	NCP	%	90			75-125	Pass	
Chromium (filtered)	S23-De0053236	NCP	%	90			75-125	Pass	
Copper (filtered)	S23-De0053236	NCP	%	89			75-125	Pass	
Iron (filtered)	S23-De0049373	NCP	%	92			75-125	Pass	
Lead (filtered)	S23-De0053236	NCP	%	90			75-125	Pass	
Mercury (filtered)	S23-De0053236	NCP	%	91			75-125	Pass	
Nickel (filtered)	S23-De0053236	NCP	%	89			75-125	Pass	
Zinc (filtered)	S23-De0053236	NCP	%	89			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S23-De0053299	NCP	%	82			75-125	Pass	
Magnesium	S23-De0053299	NCP	%	85			75-125	Pass	
Potassium	S23-De0053299	NCP	%	91			75-125	Pass	
Sodium	S23-De0053299	NCP	%	84			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Ja0002921	NCP	%	81			70-130	Pass	
TRH >C10-C16	S24-Ja0002921	NCP	%	77			70-130	Pass	
Spike - % Recovery									
				Result 1					
Nitrate-N	S23-De0046725	CP	%	115			70-130	Pass	
Nitrite-N	S23-De0046725	CP	%	100			80-120	Pass	
NOx-N	S23-De0046725	CP	%	109			80-120	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	S23-De0048101	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S23-De0048101	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
4-Methyl-2-pentanone (MIBK)	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Allyl chloride	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloroform	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S23-De0048101	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S23-De0048101	NCP	mg/L	0.001	0.001	5.5	30%	Pass	
Toluene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S23-De0048101	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S23-De0048101	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Xylenes - Total*	S23-De0048101	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-De0048101	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S23-De0053299	NCP	mg/L	25	25	1.5	30%	Pass	
Conductivity (at 25 °C)	S23-De0046468	NCP	uS/cm	5700	5600	1.5	30%	Pass	
Nitrate-N	S23-De0046724	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Nitrite-N	S23-De0046724	CP	mg/L	< 0.01	< 0.01	<1	20%	Pass	
NOx-N	S23-De0046724	CP	mg/L	< 0.01	< 0.01	<1	20%	Pass	
Redox Potential mV (relative to Ag/AgCl)	S23-De0046724	CP	mV	410	410	<1	30%	Pass	
Sulphate (as SO4)	S23-De0053299	NCP	mg/L	6.5	8.3	25	30%	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	S23-De0046044	NCP	mg/L	1200	1200	4.7	30%	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S24-Ja0002007	NCP	mg/L	12	13	6.5	30%	Pass	

Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S23-De0053236	NCP	mg/L	92	92	<1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S23-De0053236	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S23-De0053236	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S23-De0053236	NCP	mg/L	92	92	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S23-De0049686	NCP	mg/L	0.002	0.002	4.6	30%	Pass	
Cadmium (filtered)	S23-De0049686	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S24-Ja0000140	NCP	mg/L	0.026	0.027	1.9	30%	Pass	
Copper (filtered)	S24-Ja0000140	NCP	mg/L	0.76	0.75	1.7	30%	Pass	
Iron (filtered)	S24-Ja0000140	NCP	mg/L	1.2	1.1	8.1	30%	Pass	
Lead (filtered)	S23-De0046074	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S24-Ja0000140	NCP	mg/L	0.0014	0.0013	8.3	30%	Pass	
Nickel (filtered)	S24-Ja0000140	NCP	mg/L	0.64	0.63	1.5	30%	Pass	
Zinc (filtered)	S24-Ja0000140	NCP	mg/L	10	10	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	B23-De0043023	NCP	mg/L	89	87	2.9	30%	Pass	
Magnesium	B23-De0043023	NCP	mg/L	40	38	4.0	30%	Pass	
Potassium	B23-De0043023	NCP	mg/L	5.4	5.2	4.7	30%	Pass	
Sodium	B23-De0043023	NCP	mg/L	180	170	4.2	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-Ja0002881	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S24-Ja0002881	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S24-Ja0002881	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	S24-Ja0002881	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S24-Ja0002881	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S24-Ja0002881	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia-N	S23-De0046726	CP	mg/L	7.5	6.6	13	20%	Pass	

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
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

Authorised by:

Ursula Long	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Fang Yee Tan	Senior Analyst-Metal
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic
Sam Becker	Senior Analyst-Inorganic



Glenn Jackson
Managing Director

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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* Bec.chapple

Chain of Custody Documentation

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: S19142
Project Name: Waterloo Remediation
Sampled By:
Project Manager: Matt Beasley
Email Report To: *

Purchase Order:
Quote No: 230515 SENN
Turn Around Time: Standard
Page: 1 of 1
Phone/Mobile: 0421978848

Lab ID	Sample ID	Matrix *	Date	Time	Container Info: Type / Code	Container Info: Total Bottles	B8 + Iron (dissolved)	TN, TP, NP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alkalinity	BTEX	VOCs				HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	MW208	water	19/12/23	AM	4xVOA, 1xP, 1xN, 1xUA, 1xS	8	x	x	x	x	x							
	EW402	water	18/12/23	AM		8	x	x	x	x	x							
	MW23	water	18/12/23	AM		8	x	x	x	x	x							
	MW22		19/12/23	AM		8	x	x	x	x	x							
	MW120		18/12/23	PM		8	x	x	x	x	x							
	MW90		18/12/23	AM	2xVOA	2							x					
	MW91		18/12/23	AM		2							x					
	MW93		18/12/23	PM		2							x					
	EW09		18/12/23	AM		2							x					
	QC305				1xVOA	1							x					TB
	QC425				1xVOA	1						x						TS.
	QC503		18/12/23		2xVOA	2							x					Rinsate
	QC504		19/12/23		2xVOA	2												
Total																		

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:
Sampler Name: B Chapple
Signature:
Date: 19/12/23

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: B Chapple	Date: 19/12/23	Carrier / Reference #:	Name/Signature:	Date: 19/12
Of:	Time:	Date/Time:	Of:	Time: 7:0
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's Iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

6.7°C

ished by: _____
d by: _____

1055820

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	WATERLOO REMEDIATION
Project ID:	S19142
Turnaround time:	5 Day
Date/Time received	Dec 19, 2023 7:30 AM
Eurofins reference	1055820

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.
✗	Split sample sent to requested external lab.
✗	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:

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1055820
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Dec 19, 2023 7:30 AM
Due: Dec 28, 2023
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail	Conductivity (at 25 °C)	Dissolved Oxygen	HOLD	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254						X			X	X	X				X
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X	X		X	X	X	X	X	X	X	X	X
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID														
1	MW208	Dec 19, 2023		Water	S23-De0048101	X	X		X	X	X	X		X		X	X		X	X
2	EW402	Dec 18, 2023		Water	S23-De0048102	X	X		X	X	X	X		X		X	X		X	X
3	MW23	Dec 18, 2023		Water	S23-De0048103	X	X		X	X	X	X		X		X	X		X	X
4	MW22	Dec 19, 2023		Water	S23-De0048104	X	X		X	X	X	X		X		X	X		X	X
5	MW120	Dec 18, 2023		Water	S23-De0048105	X	X		X	X	X	X		X		X	X		X	X
6	MW90	Dec 18, 2023		Water	S23-De0048106								X							
7	MW91	Dec 18, 2023		Water	S23-De0048107								X							
8	MW93	Dec 18, 2023		Water	S23-De0048108								X							
9	EW09	Dec 18, 2023		Water	S23-De0048109								X							
10	QC325 (TB)	Not Provided		Water	S23-De0048110										X					
11	QC425 (TS)	Not Provided		Water	S23-De0048111													X		
12	QC503	Dec 18, 2023		Water	S23-De0048112								X							

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1055820
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Dec 19, 2023 7:30 AM
Due: Dec 28, 2023
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	HOLD	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254											X			X	X	X				X
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X		X	X	X	X	X	X	X	X	X
	(RINSATE)																			
13	Q504	Dec 19, 2023		Water	S23-De0048113			X												
Test Counts						5	5	1	5	5	5	5	5	5	1	5	5	1	5	5

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1055820-W**
Project name WATERLOO REMEDIATION
Project ID S19142
Received Date Dec 19, 2023

Client Sample ID			**MW208**	**EW402**	**MW23**	**MW22**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S23-De0048101**	**S23-De0048102**	**S23-De0048103**	**S23-De0048104**
Date Sampled			**Dec 19, 2023**	**Dec 18, 2023**	**Dec 18, 2023**	**Dec 19, 2023**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW208	EW402	MW23	MW22
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048101	S23-De0048102	S23-De0048103	S23-De0048104
Date Sampled			Dec 19, 2023	Dec 18, 2023	Dec 18, 2023	Dec 19, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	0.002	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	0.001	< 0.001	0.004	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	0.013	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	0.019	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	0.019	< 0.005
4-Bromofluorobenzene (surr.)	1	%	63	62	62	64
Toluene-d8 (surr.)	1	%	60	61	58	59
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW208	EW402	MW23	MW22
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048101	S23-De0048102	S23-De0048103	S23-De0048104
Date Sampled			Dec 19, 2023	Dec 18, 2023	Dec 18, 2023	Dec 19, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	132	115	112	113
p-Terphenyl-d14 (surr.)	1	%	146	127	122	119
Ammonia (as N)	0.01	mg/L	0.46	1.8	0.03	2.0
Chloride	1	mg/L	82	44	21	28
Conductivity (at 25 °C)	10	uS/cm	790	1000	530	610
Dissolved Oxygen	0.1	mg/L	10	5.3	11	10
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	< 0.05	0.64	< 0.05
Nitrate (as N)	0.02	mg/L	< 0.02	< 0.02	0.61	< 0.02
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	0.34	1.2	0.67	1.4
pH (at 25 °C)	0.1	pH Units	7.0	6.9	6.8	6.7
Phosphate total (as P)	0.01	mg/L	0.05	0.49	< 0.01	0.15
Phosphorus reactive (as P)	0.01	mg/L	< 0.01	0.10	< 0.01	0.12
Redox Potential mV (relative to Ag/AgCl)	1	mV	410	410	420	410
Sulphate (as SO4)	2	mg/L	23	51	95	6.5
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	480	660	290	390
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.8	3.0	0.7	3.4
Total Nitrogen (as N)*	0.2	mg/L	0.8	3.0	1.3	3.4
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	13	22	< 5	5.2
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	360	460	190	300
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	360	460	190	300
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.003	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron (filtered)	0.05	mg/L	2.2	5.8	0.86	0.54
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	0.036	< 0.001	0.007
Zinc (filtered)	0.005	mg/L	< 0.005	0.005	< 0.005	0.006
Alkali Metals						
Calcium	0.5	mg/L	62	33	55	23
Magnesium	0.5	mg/L	6.5	5.4	7.6	5.1
Potassium	0.5	mg/L	5.0	6.4	10	8.4
Sodium	0.5	mg/L	120	220	57	110

Client Sample ID			MW120	MW90	MW91	MW93
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048105	S23-De0048106	S23-De0048107	S23-De0048108
Date Sampled			Dec 18, 2023	Dec 18, 2023	Dec 18, 2023	Dec 18, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	-	-	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.008
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	0.001	< 0.001	0.004
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW120	MW90	MW91	MW93
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048105	S23-De0048106	S23-De0048107	S23-De0048108
Date Sampled			Dec 18, 2023	Dec 18, 2023	Dec 18, 2023	Dec 18, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	0.023	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	0.005	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	0.029	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	0.029	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	68	76	70	65
Toluene-d8 (surr.)	1	%	65	74	66	60
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	-	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-	-
Anthracene	0.001	mg/L	< 0.001	-	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	-	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-	-
Chrysene	0.001	mg/L	< 0.001	-	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-	-
Fluorene	0.001	mg/L	< 0.001	-	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-	-
Pyrene	0.001	mg/L	< 0.001	-	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-	-
2-Fluorobiphenyl (surr.)	1	%	111	-	-	-
p-Terphenyl-d14 (surr.)	1	%	129	-	-	-
Ammonia (as N)	0.01	mg/L	1.4	-	-	-
Chloride	1	mg/L	40	-	-	-
Conductivity (at 25 °C)	10	uS/cm	780	-	-	-
Dissolved Oxygen	0.1	mg/L	11	-	-	-

Client Sample ID			MW120	MW90	MW91	MW93
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048105	S23-De0048106	S23-De0048107	S23-De0048108
Date Sampled			Dec 18, 2023	Dec 18, 2023	Dec 18, 2023	Dec 18, 2023
Test/Reference	LOR	Unit				
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	-	-	-
Nitrate (as N)	0.02	mg/L	< 0.02	-	-	-
Nitrite (as N)	0.02	mg/L	< 0.02	-	-	-
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	-	-	-
pH (at 25 °C)	0.1	pH Units	6.9	-	-	-
Phosphate total (as P)	0.01	mg/L	0.01	-	-	-
Phosphorus reactive (as P)	0.01	mg/L	< 0.01	-	-	-
Redox Potential mV (relative to Ag/AgCl)	1	mV	410	-	-	-
Sulphate (as SO4)	2	mg/L	59	-	-	-
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	410	-	-	-
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.5	-	-	-
Total Nitrogen (as N)*	0.2	mg/L	1.5	-	-	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	9.6	-	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	340	-	-	-
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	-
Total Alkalinity (as CaCO3)	20	mg/L	340	-	-	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.049	-	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-	-
Iron (filtered)	0.05	mg/L	5.3	-	-	-
Lead (filtered)	0.001	mg/L	< 0.001	-	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-	-
Zinc (filtered)	0.005	mg/L	0.006	-	-	-
Alkali Metals						
Calcium	0.5	mg/L	73	-	-	-
Magnesium	0.5	mg/L	8.8	-	-	-
Potassium	0.5	mg/L	24	-	-	-
Sodium	0.5	mg/L	95	-	-	-

Client Sample ID			EW09	QC325 (TB)	QC425 (TS)	QC503 (RINSATE)
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048109	S23-De0048110	S23-De0048111	S23-De0048112
Date Sampled			Dec 18, 2023	Not Provided[I12]	Not Provided[I12]	Dec 18, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	-	< 0.02	-	-
TRH C6-C10	0.02	mg/L	-	< 0.02	-	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	< 0.02	-	-

Client Sample ID			EW09	QC325 (TB)	QC425 (TS)	QC503 (RINSATE)
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048109	S23-De0048110	S23-De0048111	S23-De0048112
Date Sampled			Dec 18, 2023	Not Provided[I12]	Not Provided[I12]	Dec 18, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	-	-	< 0.005
2-Propanone (Acetone)	0.005	mg/L	0.022	-	-	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	-	-	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	-	-	< 0.001
Benzene	0.001	mg/L	< 0.001	-	-	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Bromoform	0.001	mg/L	< 0.001	-	-	< 0.001
Bromomethane	0.005	mg/L	< 0.005	-	-	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	-	-	< 0.001
Chloroethane	0.005	mg/L	< 0.005	-	-	< 0.005
Chloroform	0.005	mg/L	< 0.005	-	-	< 0.005
Chloromethane	0.005	mg/L	< 0.005	-	-	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	0.012	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	-	-	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	-	-	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	-	-	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	-	-	< 0.001
Iodomethane	0.001	mg/L	< 0.001	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	-	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	-	-	< 0.005
o-Xylene	0.001	mg/L	< 0.001	-	-	< 0.001
Styrene	0.001	mg/L	< 0.001	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	0.004	-	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-	< 0.001

Client Sample ID			EW09	QC325 (TB)	QC425 (TS)	QC503 (RINSATE)
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S23-De0048109	S23-De0048110	S23-De0048111	S23-De0048112
Date Sampled			Dec 18, 2023	Not Provided[I12]	Not Provided[I12]	Dec 18, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-	< 0.001
Trichloroethene	0.001	mg/L	0.003	-	-	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	-	-	< 0.005
Vinyl chloride	0.005	mg/L	0.008	-	-	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	-	-	< 0.003
Total MAH*	0.003	mg/L	< 0.003	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	0.027	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	0.019	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	72	-	-	68
Toluene-d8 (surr.)	1	%	69	-	-	63
Naphthalene[N02]	0.01	mg/L	-	< 0.01	-	-
TRH C6-C10	1	%	-	-	72	-
BTEX						
Benzene	0.001	mg/L	-	< 0.001	-	-
Toluene	0.001	mg/L	-	< 0.001	-	-
Ethylbenzene	0.001	mg/L	-	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	-	< 0.002	-	-
o-Xylene	0.001	mg/L	-	< 0.001	-	-
Xylenes - Total*	0.003	mg/L	-	< 0.003	-	-
4-Bromofluorobenzene (surr.)	1	%	-	92	-	-
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	77	-
TRH C6-C9	1	%	-	-	71	-
BTEX						
Benzene	1	%	-	-	93	-
Ethylbenzene	1	%	-	-	82	-
m&p-Xylenes	1	%	-	-	94	-
o-Xylene	1	%	-	-	77	-
Toluene	1	%	-	-	80	-
Xylenes - Total	1	%	-	-	83	-
4-Bromofluorobenzene (surr.)	1	%	-	-	89	-

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	Sydney	Dec 28, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 28, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Dec 28, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 28, 2023	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 28, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Dec 28, 2023	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 28, 2023	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8 filtered	Sydney	Dec 28, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P			
Ammonia (as N)	Melbourne	Dec 21, 2023	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrate & Nitrite (as N)	Melbourne	Dec 21, 2023	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrate (as N)	Melbourne	Dec 21, 2023	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrite (as N)	Melbourne	Dec 21, 2023	2 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Organic Nitrogen (as N)*	Melbourne	Dec 20, 2023	7 Days
- Method: APHA 4500 Organic Nitrogen (N)			
Phosphate total (as P)	Sydney	Dec 21, 2023	28 Days
- Method: E052 Total Phosphate (as P)			
Phosphorus reactive (as P)	Melbourne	Dec 21, 2023	2 Days
- Method: APHA 4500-P			
Total Kjeldahl Nitrogen (as N)	Melbourne	Dec 21, 2023	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Sydney	Dec 28, 2023	28 Days
- Method: LTM-INO-4270 Anions by Ion Chromatography			
Sulphate (as SO4)	Sydney	Dec 28, 2023	28 Days
- Method: In-house method LTM-INO-4270 Sulphate by Ion Chromatograph			
Alkalinity (speciated)	Sydney	Dec 28, 2023	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Conductivity (at 25 °C)	Sydney	Dec 28, 2023	28 Days
- Method: LTM-INO-4030 Conductivity			
Dissolved Oxygen	Sydney	Dec 20, 2023	1 Days
- Method: LTM-INO-4130 Determination of Dissolved Oxygen using a DO meter			
pH (at 25 °C)	Sydney	Dec 28, 2023	0 Hour
- Method: LTM-GEN-7090 pH in water by ISE			
Redox Potential mV (relative to Ag/AgCl)	Melbourne	Dec 22, 2023	5 Days
- Method: APHA 2580B Redox Potential			
Total Suspended Solids Dried at 103 °C to 105 °C	Sydney	Dec 28, 2023	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Heavy Metals (filtered)	Sydney	Dec 28, 2023	180 Days

Description	Testing Site	Extracted	Holding Time
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11C: Na/K/Ca/Mg	Sydney	Dec 28, 2023	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Sydney	Dec 28, 2023	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			

eurofins

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ABN: 50 005 085 521

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

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SYDNEY
NSW 2000

Order No.:
Report #: 1055820
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Dec 19, 2023 7:30 AM
Due: Dec 28, 2023
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	HOLD	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254											X			X	X	X				X
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X		X	X	X	X	X	X	X	X	X
External Laboratory																				
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	MW208	Dec 19, 2023		Water	S23-De0048101	X	X		X	X	X	X		X		X	X		X	X
2	EW402	Dec 18, 2023		Water	S23-De0048102	X	X		X	X	X	X		X		X	X		X	X
3	MW23	Dec 18, 2023		Water	S23-De0048103	X	X		X	X	X	X		X		X	X		X	X
4	MW22	Dec 19, 2023		Water	S23-De0048104	X	X		X	X	X	X		X		X	X		X	X
5	MW120	Dec 18, 2023		Water	S23-De0048105	X	X		X	X	X	X		X		X	X		X	X
6	MW90	Dec 18, 2023		Water	S23-De0048106								X							
7	MW91	Dec 18, 2023		Water	S23-De0048107								X							
8	MW93	Dec 18, 2023		Water	S23-De0048108								X							
9	EW09	Dec 18, 2023		Water	S23-De0048109								X							
10	QC325 (TB)	Not Provided		Water	S23-De0048110										X					
11	QC425 (TS)	Not Provided		Water	S23-De0048111													X		
12	QC503	Dec 18, 2023		Water	S23-De0048112								X							

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Order No.:
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Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	HOLD	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254											X			X	X	X				X
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X		X	X	X	X	X	X	X	X	X
	(RINSATE)																			
13	Q504	Dec 19, 2023		Water	S23-De0048113			X												
Test Counts						5	5	1	5	5	5	5	5	5	1	5	5	1	5	5

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Conductivity (at 25 °C)	uS/cm	< 10			10	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Nitrite (as N)	mg/L	< 0.02			0.02	Pass	
Phosphorus reactive (as P)	mg/L	< 0.01			0.01	Pass	
Sulphate (as SO4)	mg/L	< 2			2	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 10			10	Pass	
Total Kjeldahl Nitrogen (as N)	mg/L	-0.154			0.2	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	98			70-130	Pass	
TRH C10-C14	%	111			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	104			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	103			70-130	Pass	
1.1.1-Trichloroethane	%	108			70-130	Pass	
1.2-Dichlorobenzene	%	129			70-130	Pass	
1.2-Dichloroethane	%	117			70-130	Pass	
Benzene	%	114			70-130	Pass	
Ethylbenzene	%	112			70-130	Pass	
m&p-Xylenes	%	111			70-130	Pass	
o-Xylene	%	111			70-130	Pass	
Toluene	%	110			70-130	Pass	
Trichloroethene	%	121			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	115			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	128			70-130	Pass	
Acenaphthylene	%	120			70-130	Pass	
Anthracene	%	130			70-130	Pass	
Benz(a)anthracene	%	125			70-130	Pass	
Benzo(a)pyrene	%	119			70-130	Pass	
Benzo(b&j)fluoranthene	%	123			70-130	Pass	
Benzo(k)fluoranthene	%	116			70-130	Pass	
Chrysene	%	125			70-130	Pass	
Dibenz(a.h)anthracene	%	123			70-130	Pass	
Fluoranthene	%	121			70-130	Pass	
Fluorene	%	126			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	122			70-130	Pass	
Naphthalene	%	104			70-130	Pass	
Phenanthrene	%	121			70-130	Pass	
Pyrene	%	128			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ammonia (as N)	%	113			70-130	Pass	
Chloride	%	100			70-130	Pass	
Conductivity (at 25 °C)	%	98			70-130	Pass	
Nitrate & Nitrite (as N)	%	115			70-130	Pass	
Nitrite (as N)	%	105			70-130	Pass	
Phosphorus reactive (as P)	%	116			70-130	Pass	
Sulphate (as SO4)	%	100			70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	114			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	77			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	%	95			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	%	106			70-130	Pass	
Hydroxide Alkalinity (as CaCO3)	%	106			70-130	Pass	
Total Alkalinity (as CaCO3)	%	106			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	104			80-120	Pass	
Cadmium (filtered)	%	105			80-120	Pass	
Chromium (filtered)	%	104			80-120	Pass	
Copper (filtered)	%	104			80-120	Pass	
Iron (filtered)	%	112			80-120	Pass	
Lead (filtered)	%	101			80-120	Pass	
Mercury (filtered)	%	108			80-120	Pass	
Nickel (filtered)	%	102			80-120	Pass	
Zinc (filtered)	%	108			80-120	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	107			80-120	Pass	
Magnesium	%	111			80-120	Pass	
Potassium	%	112			80-120	Pass	
Sodium	%	109			80-120	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	N23-De0032013	NCP	%	102			70-130	Pass	
TRH C10-C14	S23-De0054765	NCP	%	104			70-130	Pass	
TRH C6-C10	N23-De0032013	NCP	%	101			70-130	Pass	
TRH >C10-C16	S23-De0054765	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S23-De0035437	NCP	%	95			70-130	Pass	
1.1.1-Trichloroethane	S23-De0035437	NCP	%	81			70-130	Pass	
1.2-Dichlorobenzene	S23-De0035437	NCP	%	107			70-130	Pass	
1.2-Dichloroethane	S23-De0035437	NCP	%	91			70-130	Pass	
Benzene	N23-De0032013	NCP	%	123			70-130	Pass	
Ethylbenzene	N23-De0032013	NCP	%	113			70-130	Pass	
m&p-Xylenes	N23-De0032013	NCP	%	110			70-130	Pass	
o-Xylene	N23-De0032013	NCP	%	110			70-130	Pass	
Toluene	N23-De0032013	NCP	%	118			70-130	Pass	
Trichloroethene	S23-De0035437	NCP	%	85			70-130	Pass	
Xylenes - Total*	N23-De0032013	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	N23-De0032013	NCP	%	92			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chloride	S23-De0052127	NCP	%	110			70-130	Pass	
Sulphate (as SO4)	S23-De0052127	NCP	%	111			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	B23-De0041713	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S23-De0048221	NCP	%	98			75-125	Pass	
Cadmium (filtered)	S23-De0048221	NCP	%	95			75-125	Pass	
Chromium (filtered)	S23-De0048221	NCP	%	94			75-125	Pass	
Copper (filtered)	S23-De0048221	NCP	%	92			75-125	Pass	
Iron (filtered)	S23-De0048221	NCP	%	102			75-125	Pass	
Lead (filtered)	S23-De0048221	NCP	%	91			75-125	Pass	
Mercury (filtered)	S23-De0048221	NCP	%	99			75-125	Pass	
Nickel (filtered)	S23-De0048221	NCP	%	89			75-125	Pass	
Zinc (filtered)	S23-De0048221	NCP	%	99			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S23-De0036921	NCP	%	90			75-125	Pass	
Magnesium	S23-De0036921	NCP	%	94			75-125	Pass	
Potassium	S23-De0036921	NCP	%	96			75-125	Pass	
Sodium	S23-De0036921	NCP	%	87			75-125	Pass	
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M23-De0048449	NCP	%	112			70-130	Pass	
Nitrite (as N)	M23-De0048449	NCP	%	107			70-130	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	S23-De0048101	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	N23-De0036315	NCP	mg/L	0.08	0.05	50	30%	Fail	Q15
TRH C15-C28	N23-De0036315	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	N23-De0036315	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C6-C10	S23-De0048101	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	N23-De0036315	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	N23-De0036315	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	N23-De0036315	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.3.5-Trimethylbenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Allyl chloride	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloroform	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S23-De0048101	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S23-De0048101	CP	mg/L	0.001	0.001	5.5	30%	Pass	
Toluene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Xylenes - Total*	S23-De0048101	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-De0048101	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	M23-De0050518	NCP	mg/L	0.03	0.07	88	30%	Fail	Q15
Chloride	S23-De0052126	NCP	mg/L	1700	1700	2.6	30%	Pass	
Nitrate & Nitrite (as N)	W23-De0046567	NCP	mg/L	0.58	0.59	1.8	30%	Pass	
Nitrite (as N)	W23-De0046567	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Phosphate total (as P)	S23-De0035441	NCP	mg/L	0.98	0.99	1.2	30%	Pass	
Redox Potential mV (relative to Ag/AgCl)	S23-De0046724	NCP	mV	410	410	<1	30%	Pass	
Sulphate (as SO4)	S23-De0052126	NCP	mg/L	190	150	27	30%	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	S23-De0043308	NCP	mg/L	13000	13000	5.0	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Total Kjeldahl Nitrogen (as N)	S23-De0048101	CP	mg/L	0.8	0.8	3.4	30%	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S23-De0043308	NCP	mg/L	10	11	5.8	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S23-De0048101	CP	mg/L	360	360	2.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S23-De0048101	CP	mg/L	< 20	< 20	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S23-De0048101	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S23-De0048101	CP	mg/L	360	360	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S23-De0048101	CP	mg/L	0.003	0.003	1.9	30%	Pass	
Cadmium (filtered)	S23-De0048101	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	N23-De0035431	NCP	mg/L	0.002	0.002	3.9	30%	Pass	
Iron (filtered)	S23-De0048101	CP	mg/L	2.2	2.1	6.3	30%	Pass	
Lead (filtered)	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S23-De0048101	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S23-De0048101	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S23-De0048101	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	S23-De0035437	NCP	mg/L	24	24	1.9	30%	Pass	
Magnesium	S23-De0035437	NCP	mg/L	6.5	6.2	3.3	30%	Pass	
Potassium	S23-De0035437	NCP	mg/L	11	11	2.7	30%	Pass	
Sodium	S23-De0035437	NCP	mg/L	78	73	5.9	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Nitrate (as N)	M23-De0049349	NCP	mg/L	0.82	0.82	<1	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S23-De0048102	CP	mg/L	460	490	5.7	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S23-De0048102	CP	mg/L	< 20	< 20	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S23-De0048102	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S23-De0048102	CP	mg/L	460	490	5.7	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S23-De0048105	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S23-De0048105	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.3-Dichloropropane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Allyl chloride	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloroform	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S23-De0048105	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S23-De0048105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S23-De0048105	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Xylenes - Total*	S23-De0048105	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-De0048105	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25 °C)	S23-De0048105	CP	uS/cm	780	760	1.6	30%	Pass	

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	N/A
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
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.

Authorised by:

Adam Bateup	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Fang Yee Tan	Senior Analyst-Metal
Mary Makarios	Senior Analyst-Inorganic
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic



Glenn Jackson
Managing Director

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.

* Matt. Beasley
* Matthew. linz
* Christopher. Redford @ Senversa. com. au
* Bec. Chapple

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Chain of Custody Documentation

Laboratory: mgl/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: 519142
Project Name: Waterloo Remediation
Sampled By: Matt Linz.
Project Manager: Matt. Beasley
Email Report To: *

Purchase Order:
Quote No: 230515SENN
Turn Around Time:
Page: 1 of 1
Phone/Mobile: 0421978848

Lab ID	Sample ID	Matrix *	Date	Time	Container Information: Type / Code	Total Bottles	B8 + Iron (dissolved)	TN, TP, RP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alk	Btex	VOCs				HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	MW208	Water	11/01/24	—	2VOA, 1xP, 1xN, 1A	6	x	x	x	x	x							
	EW402				"	6												
	MW23				"	6												
	MW22				"	6												
	MW120				"	6												
	MW90				2xVOA	2							x					
	MW91				"	2							x					
	MW93				"	2							x					
	MW117				2VOA, 1xP, 1xN,	6	x	x	x	x	x								
	IW806					6	x	x	x	x	x								
	EW09				2xVOA	2							x					
	QC127				2VOA, 1xB, 2xN, 1xUA, 1xS.	6	x	x	x	x	x							DUP.
	QC329				2VOA	2						x						TB
	QC429.				2VOA	2						x						TS
Total																		

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: matt linz
Signature:
Date:

Relinquished By:		Method of Shipment (if applicable):	Received by: Bitrin Al Smaydi	
Name/Signature:	Date: 1/1/23	Carrier / Reference #:	Name/Signature:	Date: 1/1/24
Of: matt linz Senversa	Time:	Date/Time:	Of:	Time: 6:10pm
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

19.4°C

Completed by: _____
Checked by: _____

1059260 SEN-TECH-018F_coc1

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

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Welshpool
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NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	WATERLOO REMEDIATION
Project ID:	S19142
Turnaround time:	5 Day
Date/Time received	Jan 11, 2024 6:10 PM
Eurofins reference	1059260

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

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
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Perth
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WA 6106
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NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1059260
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 11, 2024 6:10 PM
Due: Jan 19, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254										X					X				
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X		X	X	X	X	X	X	X	X	X
External Laboratory																			
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	MW208	Jan 11, 2024		Water	S24-Ja0013197	X	X	X	X	X	X		X		X	X		X	X
2	EW402	Jan 11, 2024		Water	S24-Ja0013198	X	X	X	X	X	X		X		X	X		X	X
3	MW23	Jan 11, 2024		Water	S24-Ja0013199	X	X	X	X	X	X		X		X	X		X	X
4	MW22	Jan 11, 2024		Water	S24-Ja0013200	X	X	X	X	X	X		X		X	X		X	X
5	MW120	Jan 11, 2024		Water	S24-Ja0013201	X	X	X	X	X	X		X		X	X		X	X
6	MW90	Jan 11, 2024		Water	S24-Ja0013202							X							
7	MW91	Jan 11, 2024		Water	S24-Ja0013203							X							
8	MW93	Jan 11, 2024		Water	S24-Ja0013204							X							
9	MW117	Jan 11, 2024		Water	S24-Ja0013205	X	X	X	X	X	X		X		X	X		X	X
10	IW806	Jan 11, 2024		Water	S24-Ja0013206	X	X	X	X	X	X		X		X	X		X	X
11	EW09	Jan 11, 2024		Water	S24-Ja0013207							X							
12	QC127	Jan 11, 2024		Water	S24-Ja0013208	X	X	X	X	X	X		X		X	X		X	X

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email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
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Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1059260
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 11, 2024 6:10 PM
Due: Jan 19, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254										X					X				
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X		X	X	X	X	X	X	X	X	X
13	QC329	Jan 11, 2024		Trip Blank (liquid)	S24-Ja0013209									X					
14	QC429	Jan 11, 2024		Trip Spike (liquid)	S24-Ja0013210												X		
Test Counts						8	8	8	8	8	8	4	8	1	8	8	1	8	8

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1059260-W**
Project name WATERLOO REMEDIATION
Project ID S19142
Received Date Jan 11, 2024

Client Sample ID			**MW208**	**EW402**	**MW23**	**MW22**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S24-Ja0013197**	**S24-Ja0013198**	**S24-Ja0013199**	**S24-Ja0013200**
Date Sampled			**Jan 11, 2024**	**Jan 11, 2024**	**Jan 11, 2024**	**Jan 11, 2024**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	0.05	< 0.05	0.06
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	0.05	< 0.05	0.06
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	0.010	< 0.005	0.011	0.010
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW208	EW402	MW23	MW22
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013197	S24-Ja0013198	S24-Ja0013199	S24-Ja0013200
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	0.005	< 0.001	0.004	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	0.001	< 0.001	0.004	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	0.006	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	0.006	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	0.012	< 0.005	0.014	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	0.006	< 0.005	0.014	< 0.005
4-Bromofluorobenzene (surr.)	1	%	58	101	58	60
Toluene-d8 (surr.)	1	%	64	80	63	64
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW208	EW402	MW23	MW22
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013197	S24-Ja0013198	S24-Ja0013199	S24-Ja0013200
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	INT	INT	52	53
p-Terphenyl-d14 (surr.)	1	%	76	59	100	104
Ammonia (as N)	0.01	mg/L	0.45	1.7	0.05	1.7
Chloride	1	mg/L	68	35	19	31
Conductivity (at 25 °C)	10	uS/cm	700	1100	460	680
Dissolved Oxygen	0.1	mg/L	6.8	6.1	7.9	1.1
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	< 0.05	0.47	0.09
Nitrate (as N)	0.02	mg/L	< 0.02	0.02	0.44	0.09
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	0.02	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	0.35	0.6	0.55	1.1
pH (at 25 °C)	0.1	pH Units	7.4	7.0	7.0	6.8
Phosphate total (as P)	0.01	mg/L	0.02	0.09	< 0.01	0.11
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	0.11	< 0.05	< 0.05
Redox Potential mV (relative to Ag/AgCl)	1	mV	240	230	270	240
Sulphate (as SO4)	2	mg/L	43	440	80	35
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	570	4000	390	550
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.8	2.3	0.6	2.8
Total Nitrogen (as N)*	0.1	mg/L	0.8	2.3	1.1	2.9
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	11	9.8	130
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	320	320	200	310
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	320	320	200	310
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.003	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	0.001	0.002	< 0.001	0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iron (filtered)	0.05	mg/L	1.4	7.4	0.86	1.2
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	0.020	< 0.001	0.002
Zinc (filtered)	0.005	mg/L	0.006	< 0.005	< 0.005	< 0.005
Alkali Metals						
Calcium	0.5	mg/L	57	74	43	31
Magnesium	0.5	mg/L	5.8	9.6	5.0	6.3
Potassium	0.5	mg/L	6.0	7.8	8.6	8.7
Sodium	0.5	mg/L	130	210	63	110

Client Sample ID			MW120	MW90	MW91	MW93
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013201	S24-Ja0013202	S24-Ja0013203	S24-Ja0013204
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	-	-	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	-	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	0.012	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	0.001	0.003
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW120	MW90	MW91	MW93
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013201	S24-Ja0013202	S24-Ja0013203	S24-Ja0013204
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	0.012	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	0.014	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	0.014	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	55	58	96	55
Toluene-d8 (surr.)	1	%	62	62	78	56
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	-	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-	-
Anthracene	0.001	mg/L	< 0.001	-	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	-	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-	-
Chrysene	0.001	mg/L	< 0.001	-	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-	-
Fluorene	0.001	mg/L	< 0.001	-	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-	-
Pyrene	0.001	mg/L	< 0.001	-	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-	-
2-Fluorobiphenyl (surr.)	1	%	53	-	-	-
p-Terphenyl-d14 (surr.)	1	%	65	-	-	-
Ammonia (as N)	0.01	mg/L	1.2	-	-	-
Chloride	1	mg/L	34	-	-	-
Conductivity (at 25 °C)	10	uS/cm	660	-	-	-
Dissolved Oxygen	0.1	mg/L	7.8	-	-	-

Client Sample ID			MW120	MW90	MW91	MW93
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013201	S24-Ja0013202	S24-Ja0013203	S24-Ja0013204
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	-	-	-
Nitrate (as N)	0.02	mg/L	< 0.02	-	-	-
Nitrite (as N)	0.02	mg/L	< 0.02	-	-	-
Organic Nitrogen (as N)*	0.2	mg/L	0.2	-	-	-
pH (at 25 °C)	0.1	pH Units	7.2	-	-	-
Phosphate total (as P)	0.01	mg/L	< 0.01	-	-	-
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	-	-	-
Redox Potential mV (relative to Ag/AgCl)	1	mV	210	-	-	-
Sulphate (as SO4)	2	mg/L	51	-	-	-
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	520	-	-	-
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.4	-	-	-
Total Nitrogen (as N)*	0.1	mg/L	1.4	-	-	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	-	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	340	-	-	-
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	-
Total Alkalinity (as CaCO3)	20	mg/L	340	-	-	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.028	-	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-	-	-
Chromium (filtered)	0.001	mg/L	0.001	-	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-	-
Iron (filtered)	0.05	mg/L	4.0	-	-	-
Lead (filtered)	0.001	mg/L	< 0.001	-	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-	-
Zinc (filtered)	0.005	mg/L	< 0.005	-	-	-
Alkali Metals						
Calcium	0.5	mg/L	70	-	-	-
Magnesium	0.5	mg/L	8.2	-	-	-
Potassium	0.5	mg/L	23	-	-	-
Sodium	0.5	mg/L	81	-	-	-

Client Sample ID			MW117	IW806	EW09	QC127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013205	S24-Ja0013206	S24-Ja0013207	S24-Ja0013208
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	0.05	0.28	-	0.12
TRH C15-C28	0.1	mg/L	< 0.1	0.3	-	0.2
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	0.58	-	0.32
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	0.05	0.14	-	0.15

Client Sample ID			MW117	IW806	EW09	QC127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013205	S24-Ja0013206	S24-Ja0013207	S24-Ja0013208
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	0.05	0.14	-	0.15
TRH >C16-C34	0.1	mg/L	< 0.1	0.3	-	0.2
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	0.44	-	0.35
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	0.007	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	0.096	0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW117	IW806	EW09	QC127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013205	S24-Ja0013206	S24-Ja0013207	S24-Ja0013208
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	0.012	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	0.002	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	0.021	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	0.014	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	0.145	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	0.131	< 0.005
4-Bromofluorobenzene (surr.)	1	%	103	58	105	90
Toluene-d8 (surr.)	1	%	71	61	81	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	-	< 0.01
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	51	INT	-	INT
p-Terphenyl-d14 (surr.)	1	%	139	127	-	114
Ammonia (as N)	0.01	mg/L	< 0.01	5.9	-	5.2
Chloride	1	mg/L	46	26	-	23
Conductivity (at 25 °C)	10	uS/cm	640	1000	-	870
Dissolved Oxygen	0.1	mg/L	8.5	1.3	-	1.1
Nitrate & Nitrite (as N)	0.05	mg/L	35	< 0.05	-	< 0.05
Nitrate (as N)	0.02	mg/L	35	0.05	-	< 0.02
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	3.5	4.1	-	4.4
pH (at 25 °C)	0.1	pH Units	6.1	6.7	-	7.0
Phosphate total (as P)	0.01	mg/L	0.01	0.24	-	0.17
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	0.13	-	0.12
Redox Potential mV (relative to Ag/AgCl)	1	mV	270	230	-	240

Client Sample ID			MW117	IW806	EW09	QC127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0013205	S24-Ja0013206	S24-Ja0013207	S24-Ja0013208
Date Sampled			Jan 11, 2024	Jan 11, 2024	Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit				
Sulphate (as SO4)	2	mg/L	170	< 2	-	< 2
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	510	690	-	690
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	3.5	10	-	9.6
Total Nitrogen (as N)*	0.1	mg/L	39	10	-	9.6
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	50	42	-	36
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	38	630	-	600
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	< 20
Total Alkalinity (as CaCO3)	20	mg/L	38	630	-	600
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.001	-	0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	-	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Copper (filtered)	0.001	mg/L	0.003	< 0.001	-	< 0.001
Iron (filtered)	0.05	mg/L	< 0.05	1.2	-	0.10
Lead (filtered)	0.001	mg/L	0.001	< 0.001	-	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	-	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	0.003	-	0.002
Zinc (filtered)	0.005	mg/L	0.030	< 0.005	-	< 0.005
Alkali Metals						
Calcium	0.5	mg/L	120	91	-	89
Magnesium	0.5	mg/L	4.9	8.4	-	8.3
Potassium	0.5	mg/L	2.1	5.7	-	5.8
Sodium	0.5	mg/L	20	130	-	140

Client Sample ID			QC329	QC429
Sample Matrix			Trip Blank (liquid)	Trip Spike (liquid)
Eurofins Sample No.			S24-Ja0013209	S24-Ja0013210
Date Sampled			Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	0.02	mg/L	< 0.02	-
TRH C6-C10	0.02	mg/L	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-
Naphthalene[N02]	0.01	mg/L	< 0.01	-
TRH C6-C10	1	%	-	72
BTEX				
Benzene	0.001	mg/L	< 0.001	-
Toluene	0.001	mg/L	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	121	-

Client Sample ID			QC329	QC429
Sample Matrix			Trip Blank (liquid)	Trip Spike (liquid)
Eurofins Sample No.			S24-Ja0013209	S24-Ja0013210
Date Sampled			Jan 11, 2024	Jan 11, 2024
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
Naphthalene	1	%	-	110
TRH C6-C9	1	%	-	71
BTEX				
Benzene	1	%	-	110
Ethylbenzene	1	%	-	91
m&p-Xylenes	1	%	-	99
o-Xylene	1	%	-	93
Toluene	1	%	-	110
Xylenes - Total	1	%	-	95
4-Bromofluorobenzene (surr.)	1	%	-	117

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	Sydney	Jan 17, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 15, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Jan 15, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jan 15, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 17, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Jan 15, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 17, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8 filtered	Sydney	Jan 17, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P			
Ammonia (as N)	Melbourne	Jan 17, 2024	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrate & Nitrite (as N)	Melbourne	Jan 16, 2024	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrate (as N)	Melbourne	Jan 16, 2024	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrite (as N)	Melbourne	Jan 16, 2024	2 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Organic Nitrogen (as N)*	Melbourne	Jan 16, 2024	7 Days
- Method: APHA 4500 Organic Nitrogen (N)			
Phosphate total (as P)	Sydney	Jan 17, 2024	28 Days
- Method: E052 Total Phosphate (as P)			
Phosphorus reactive (as P)	Sydney	Jan 17, 2024	28 Days
- Method: E052 Reactive phosphate (as P)			
Total Kjeldahl Nitrogen (as N)	Melbourne	Jan 16, 2024	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Sydney	Jan 17, 2024	28 Days
- Method: LTM-INO-4270 Anions by Ion Chromatography			
Sulphate (as SO4)	Sydney	Jan 17, 2024	28 Days
- Method: In-house method LTM-INO-4270 Sulphate by Ion Chromatograph			
Alkalinity (speciated)	Sydney	Jan 17, 2024	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Conductivity (at 25 °C)	Sydney	Jan 17, 2024	28 Days
- Method: LTM-INO-4030 Conductivity			
Dissolved Oxygen	Sydney	Jan 19, 2024	1 Days
- Method: LTM-INO-4130 Determination of Dissolved Oxygen using a DO meter			
pH (at 25 °C)	Sydney	Jan 17, 2024	0 Hour
- Method: LTM-GEN-7090 pH in water by ISE			
Redox Potential mV (relative to Ag/AgCl)	Melbourne	Jan 17, 2024	5 Days
- Method: APHA 2580B Redox Potential			
Total Suspended Solids Dried at 103 °C to 105 °C	Sydney	Jan 17, 2024	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Heavy Metals (filtered)	Sydney	Jan 17, 2024	180 Days

Description	Testing Site	Extracted	Holding Time
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11C: Na/K/Ca/Mg	Sydney	Jan 18, 2024	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Sydney	Jan 17, 2024	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			

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Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Order No.:
Report #: 1059260
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 11, 2024 6:10 PM
Due: Jan 19, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S19142

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254										X					X				
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X		X	X	X	X	X	X	X	X	X
External Laboratory																			
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	MW208	Jan 11, 2024		Water	S24-Ja0013197	X	X	X	X	X	X		X		X	X		X	X
2	EW402	Jan 11, 2024		Water	S24-Ja0013198	X	X	X	X	X	X		X		X	X		X	X
3	MW23	Jan 11, 2024		Water	S24-Ja0013199	X	X	X	X	X	X		X		X	X		X	X
4	MW22	Jan 11, 2024		Water	S24-Ja0013200	X	X	X	X	X	X		X		X	X		X	X
5	MW120	Jan 11, 2024		Water	S24-Ja0013201	X	X	X	X	X	X		X		X	X		X	X
6	MW90	Jan 11, 2024		Water	S24-Ja0013202							X							
7	MW91	Jan 11, 2024		Water	S24-Ja0013203							X							
8	MW93	Jan 11, 2024		Water	S24-Ja0013204							X							
9	MW117	Jan 11, 2024		Water	S24-Ja0013205	X	X	X	X	X	X		X		X	X		X	X
10	IW806	Jan 11, 2024		Water	S24-Ja0013206	X	X	X	X	X	X		X		X	X		X	X
11	EW09	Jan 11, 2024		Water	S24-Ja0013207							X							
12	QC127	Jan 11, 2024		Water	S24-Ja0013208	X	X	X	X	X	X		X		X	X		X	X

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Project Name: WATERLOO REMEDIATION
Project ID: S19142

Order No.:
Report #: 1059260
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Received: Jan 11, 2024 6:10 PM
Due: Jan 19, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254										X					X				
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X		X	X	X	X	X	X	X	X	X
13	QC329	Jan 11, 2024		Trip Blank (liquid)	S24-Ja0013209									X					
14	QC429	Jan 11, 2024		Trip Spike (liquid)	S24-Ja0013210												X		
Test Counts						8	8	8	8	8	8	4	8	1	8	8	1	8	8

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Conductivity (at 25 °C)	uS/cm	< 10			10	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Nitrite (as N)	mg/L	< 0.02			0.02	Pass	
Phosphate total (as P)	mg/L	-0.00048			0.01	Pass	
Sulphate (as SO4)	mg/L	< 2			2	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 10			10	Pass	
Total Kjeldahl Nitrogen (as N)	mg/L	< 0.2			0.2	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	119			70-130	Pass	
TRH C10-C14	%	119			70-130	Pass	
TRH C6-C10	%	116			70-130	Pass	
TRH >C10-C16	%	102			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	92			70-130	Pass	
1.1.1-Trichloroethane	%	73			70-130	Pass	
1.2-Dichlorobenzene	%	115			70-130	Pass	
1.2-Dichloroethane	%	110			70-130	Pass	
Benzene	%	84			70-130	Pass	
Ethylbenzene	%	100			70-130	Pass	
m&p-Xylenes	%	112			70-130	Pass	
o-Xylene	%	107			70-130	Pass	
Toluene	%	104			70-130	Pass	
Trichloroethene	%	82			70-130	Pass	
Xylenes - Total*	%	110			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	122			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	
Anthracene	%	126			70-130	Pass	
Benz(a)anthracene	%	106			70-130	Pass	
Benzo(a)pyrene	%	113			70-130	Pass	
Benzo(b&j)fluoranthene	%	109			70-130	Pass	
Benzo(g.h.i)perylene	%	115			70-130	Pass	
Benzo(k)fluoranthene	%	117			70-130	Pass	
Chrysene	%	117			70-130	Pass	
Dibenz(a.h)anthracene	%	117			70-130	Pass	
Fluoranthene	%	112			70-130	Pass	
Fluorene	%	112			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	116			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
Phenanthrene	%	108			70-130	Pass	
Pyrene	%	115			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ammonia (as N)	%	112			70-130	Pass	
Chloride	%	96			70-130	Pass	
Conductivity (at 25 °C)	%	102			70-130	Pass	
Nitrate & Nitrite (as N)	%	110			70-130	Pass	
Nitrite (as N)	%	97			70-130	Pass	
Phosphate total (as P)	%	83			70-130	Pass	
Sulphate (as SO4)	%	92			70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	108			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	91			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	%	97			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	%	130			70-130	Pass	
Hydroxide Alkalinity (as CaCO3)	%	130			70-130	Pass	
Total Alkalinity (as CaCO3)	%	130			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	104			80-120	Pass	
Cadmium (filtered)	%	104			80-120	Pass	
Chromium (filtered)	%	109			80-120	Pass	
Copper (filtered)	%	109			80-120	Pass	
Iron (filtered)	%	111			80-120	Pass	
Lead (filtered)	%	107			80-120	Pass	
Mercury (filtered)	%	107			80-120	Pass	
Nickel (filtered)	%	106			80-120	Pass	
Zinc (filtered)	%	108			80-120	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	97			80-120	Pass	
Magnesium	%	108			80-120	Pass	
Potassium	%	96			80-120	Pass	
Sodium	%	96			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	N24-Ja0014038	NCP	%	93			70-130	Pass	
TRH >C10-C16	N24-Ja0014038	NCP	%	86			70-130	Pass	
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M24-Ja0012574	NCP	%	112			70-130	Pass	
Nitrite (as N)	M24-Ja0012574	NCP	%	104			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S24-Ja0013197	CP	%	102			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	N24-Ja0013365	NCP	%	105			75-125	Pass	
Cadmium (filtered)	N24-Ja0013365	NCP	%	100			75-125	Pass	
Chromium (filtered)	N24-Ja0013365	NCP	%	101			75-125	Pass	
Copper (filtered)	N24-Ja0013365	NCP	%	98			75-125	Pass	
Iron (filtered)	S24-Ja0018362	NCP	%	115			75-125	Pass	
Lead (filtered)	N24-Ja0013365	NCP	%	99			75-125	Pass	
Mercury (filtered)	N24-Ja0013365	NCP	%	92			75-125	Pass	
Nickel (filtered)	N24-Ja0013365	NCP	%	95			75-125	Pass	
Zinc (filtered)	N24-Ja0013365	NCP	%	97			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S24-Ja0013197	CP	%	80			75-125	Pass	
Magnesium	S24-Ja0013197	CP	%	94			75-125	Pass	
Potassium	S24-Ja0013197	CP	%	92			75-125	Pass	
Sodium	N24-Ja0013215	NCP	%	92			75-125	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.2-Dichlorobenzene	S24-Ja0013203	CP	%	102			70-130	Pass	
Ethylbenzene	S24-Ja0013203	CP	%	91			70-130	Pass	
m&p-Xylenes	S24-Ja0013203	CP	%	90			70-130	Pass	
o-Xylene	S24-Ja0013203	CP	%	85			70-130	Pass	
Toluene	S24-Ja0013203	CP	%	94			70-130	Pass	
Xylenes - Total*	S24-Ja0013203	CP	%	89			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Ja0013203	CP	%	95			70-130	Pass	
Spike - % Recovery									
				Result 1					
Total Kjeldahl Nitrogen (as N)	S24-Ja0013205	CP	%	93			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chloride	S24-Ja0013208	CP	%	102			70-130	Pass	
Sulphate (as SO4)	S24-Ja0013208	CP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	N24-Ja0010500	NCP	%	83			70-130	Pass	
TRH C6-C10	N24-Ja0010500	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	N24-Ja0010500	NCP	%	79			70-130	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 C10-C14	N24-Ja0014037	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	N24-Ja0014037	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	N24-Ja0014037	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	N24-Ja0014037	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	N24-Ja0014037	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	N24-Ja0014037	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	M23-De0029519	NCP	mg/L	0.64	0.64	<1	30%	Pass	
Conductivity (at 25 °C)	S24-Ja0013197	CP	uS/cm	700	710	1.00	30%	Pass	
Nitrate & Nitrite (as N)	B24-Ja0010610	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Nitrate (as N)	M24-Ja0014379	NCP	mg/L	2.5	2.5	<1	30%	Pass	
Nitrite (as N)	B24-Ja0010610	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Redox Potential mV (relative to Ag/AgCl)	M24-Ja0017589	NCP	mV	190	190	<1	30%	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	S24-Ja0013197	CP	mg/L	570	540	5.4	30%	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S24-Ja0013197	CP	mg/L	< 5	< 5	<1	30%	Pass	

Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S24-Ja0013197	CP	mg/L	320	330	2.8	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S24-Ja0013197	CP	mg/L	< 20	< 20	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S24-Ja0013197	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S24-Ja0013197	CP	mg/L	320	330	2.8	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	B24-Ja0011511	NCP	mg/L	0.001	0.001	6.5	30%	Pass	
Copper (filtered)	B24-Ja0011511	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iron (filtered)	B24-Ja0011511	NCP	mg/L	0.22	0.22	1.7	30%	Pass	
Lead (filtered)	B24-Ja0011511	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Nickel (filtered)	B24-Ja0011511	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	W24-Ja0016143	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Magnesium	W24-Ja0016143	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Potassium	W24-Ja0016143	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Sodium	W24-Ja0016143	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Ja0013204	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S24-Ja0013204	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Allyl chloride	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Chloroform	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Ja0013204	CP	mg/L	0.003	0.003	4.9	30%	Pass	
cis-1.3-Dichloropropene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-Ja0013204	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S24-Ja0013204	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S24-Ja0013204	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Xylenes - Total*	S24-Ja0013204	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Ja0013204	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Ja0013205	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S24-Ja0013205	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Allyl chloride	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Bromochloromethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloroform	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-Ja0013205	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S24-Ja0013205	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S24-Ja0013205	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Xylenes - Total*	S24-Ja0013205	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Ja0013205	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S24-Ja0013206	CP	mg/L	26	25	4.5	30%	Pass	
Sulphate (as SO4)	S24-Ja0013206	CP	mg/L	< 2	< 2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Total Kjeldahl Nitrogen (as N)	S24-Ja0013208	CP	mg/L	9.6	10	8.5	30%	Pass	

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

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

Authorised by:

Adam Bateup	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Inorganic
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic



Glenn Jackson
Managing Director

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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senversa

Chain of Custody Documentation

1/2

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Laboratory: mgt/Eurofins VIC
Address:
Contact:
Phone: Sample Receipt

Job Number: S19142
Project Name: Waterloo Remediation
Sampled By: [redacted]
Project Manager: Matthew Beasley
Email Report To: *

Purchase Order:
Quote No: 230575SENN
Turn Around Time: Standard
Page: 1 of 2
Phone/Mobile: 0421978848

Lab ID	Sample ID	Matrix*	Date	Time	Container Type / Code	Total Bottles	Analysis Required: B8+Iron (dissolved)	TN, TP, RP, Ammonia	pH, Ec, TDS, TSS	Redox, PO	Cations, Anions, ALK	BTEX	VOC's.				HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
1	MW63A	Water	23/1/24	—		7		X	X	X	X	X	X					Standard tat
2	MW63	Water	23/1/24			4							X					
3	IW808	Water	23/1/24			2							X					
4	IW807	Water	23/1/24			7		X	X	X	X	X	X					
5	IW507	Water	24/1/24			2							X					
6	MW127	Water	23/1/24			8	X	X	X	X	X	X	X					
7	MW126	Water	23/1/24			5	X	X	X	X	X	X	X					
8	MW611	Water	23/1/24			2							X					
9	MW201	Water	22/1/24			2							X					
10	MW201A	Water	22/1/24			2							X					
11	MW206	Water	22/1/24			2							X					
12	MW128	Water	23/1/24			8	X	X	X	X	X	X	X					
13	MW125	Water	23/1/24	[redacted]		8	X	X	X	X	X	X	X					
14	MW129	Water	23/1/24	[redacted]		8	X	X	X	X	X	X	X					
15	MW64	Water	23/1/24			4							X					
16	IW809	Water	23/1/24			6					X		X					
17	MW20	Water	24/1/24			2							X					
18	MW40	Water	24/1/24			4							X					
19	QC135	Water	24/1/24			8	X	X	X	X	X	X	X					
20	QC234	Water	23/1/24			4		X	X	X	X	X	X					
Total																		

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name:
Signature:
Date: 25/1/24

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: Matt Tint	Date:	Carrier / Reference #:	Name/Signature: Brandy Cook	Date: 25/1/24
Of: Senversa.	Time:	Date/Time:	Of:	Time: 2:55
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by:
Checked by:

19.1 °C

1063458

* Matt. Beasley
* Matthew. linz @ Senversa. com. au
* Christopher - Redford
* Bec. Chapple

2/2.

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Chain of Custody Documentation

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: 519142
Project Name: Waterloo Remediation
Sampled By:
Project Manager: Matt Beasley
Email Report To:

Purchase Order:
Quote No: 230515 SENN
Turn Around Time: Standard
Page: 2 of 2
Phone/Mobile: 0421978848

Lab ID	Sample ID	Matrix *	Date	Time	Container Information: Type / Code	Total Bottles	Analysis Required: BB + Iron (dissolved)	FE, TP, RP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alk	VOC's	BTEXN				HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
~~21~~	~~QC235~~	~~Water~~	~~23/1/24~~	—		2	x	x	x	x	x	x						Standard.
22	MW113	Water	23/1/24	—		2						x						
23	QC134	Water	23/1/24	↓		7		x	x	x	x	x						
24	QC334	"	"			2						x	x					TB
25	QC434	"	"			2						x						TS
26	QC506	"	"	—		8	x	x	x	x	x	x						
27	MW21	"	25/1/24	—								x						
Total																		

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name:
Signature:
Date: M Linz

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: Matt Linz	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of: Senversa	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

1063458

Ursula Long

From: Bec Chapple <bec.chapple@senversa.com.au>
Sent: Monday, 5 February 2024 11:14 AM
To: Ursula Long; Matt Beasley
Cc: Matthew Linz
Subject: RE: Eurofins DRAFT Test Results - Report 1063458 : Site WATERLOO REMEDIATION (S19142)

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins. Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Ursula,

Thanks so much for that! When the final report is issued, could you please update the job number for this to S20743 instead of S19142 please?

Thanks heaps,

senversa
Bec Chapple
Project Environmental Scientist
M: **+61408 038 593**
www.senversa.com.au
Sydney, NSW, 2000, Australia

From: UrsulaLong@eurofins.com <UrsulaLong@eurofins.com>
Sent: Friday, February 2, 2024 8:03 PM
To: Matt Beasley <Matt.Beasley@senversa.com.au>
Cc: Bec Chapple <bec.chapple@senversa.com.au>; Christopher Redford <Christopher.Redford@senversa.com.au>; Matthew Linz <Matthew.Linz@senversa.com.au>
Subject: Eurofins DRAFT Test Results - Report 1063458 : Site WATERLOO REMEDIATION (S19142)

Please find attached draft results for your project in the subject header.

Regards

Ursula Long

Eurofins
179 Magowar Road
Girraween NSW 2145
AUSTRALIA
Phone: +61 428 845 495
Email: UrsulaLong@eurofins.com

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	WATERLOO REMEDIATION
Project ID:	S20743
Turnaround time:	5 Day
Date/Time received	Jan 25, 2024 4:55 PM
Eurofins reference	1063458

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:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Asb)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1063458
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 25, 2024 4:55 PM
Due: Feb 2, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S20743

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail	Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	BTEX	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254					X						X			X	
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X		X	X	X	X	X	X	X	X		X
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID														
1	MW63A	Jan 23, 2024		Water	S24-Ja0047486	X	X		X	X	X	X	X			X	X		X	X
2	MW63	Jan 23, 2024		Water	S24-Ja0047487								X							
3	IW808	Jan 23, 2024		Water	S24-Ja0047488								X							
4	IW807	Jan 23, 2024		Water	S24-Ja0047489	X	X		X	X	X	X	X			X	X		X	X
5	IW507	Jan 24, 2024		Water	S24-Ja0047490								X							
6	MW127	Jan 23, 2024		Water	S24-Ja0047491	X	X	X	X	X	X	X		X		X	X		X	X
7	MW126	Jan 23, 2024		Water	S24-Ja0047492	X	X	X	X	X	X	X		X		X	X		X	X
8	MW611	Jan 23, 2024		Water	S24-Ja0047493								X							
9	MW201	Jan 22, 2024		Water	S24-Ja0047494								X							
10	MW201A	Jan 22, 2024		Water	S24-Ja0047495								X							
11	MW206	Jan 22, 2024		Water	S24-Ja0047496								X							
12	MW128	Jan 23, 2024		Water	S24-Ja0047497	X	X	X	X	X	X	X		X		X	X		X	X

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Eurofins Environment Testing NZ Ltd
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1063458
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 25, 2024 4:55 PM
Due: Feb 2, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S20743

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	BTEX	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254										X						X			X	
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X		X	X	X	X	X	X	X	X		X
13	MW125	Jan 23, 2024		Water	S24-Ja0047498	X	X	X	X	X	X	X		X		X	X		X	X
14	MW129	Jan 23, 2024		Water	S24-Ja0047499	X	X	X	X	X	X	X		X		X	X		X	X
15	MW64	Jan 23, 2024		Water	S24-Ja0047500								X							
16	IW809	Jan 23, 2024		Water	S24-Ja0047501								X				X		X	
17	MW20	Jan 24, 2024		Water	S24-Ja0047502								X							
18	MW40	Jan 24, 2024		Water	S24-Ja0047503								X							
19	QC135	Jan 24, 2024		Water	S24-Ja0047504	X	X	X	X	X	X	X		X		X	X		X	X
20	MW113	Jan 23, 2024		Water	S24-Ja0047505								X							
21	QC134	Jan 23, 2024		Water	S24-Ja0047506	X	X		X	X	X	X	X			X	X		X	X
22	QC334 TB	Jan 23, 2024		Water	S24-Ja0047507										X					
23	QC434 TS	Jan 23, 2024		Water	S24-Ja0047508													X		
24	QC506	Jan 23, 2024		Water	S24-Ja0047509	X	X	X	X	X	X	X		X		X	X		X	X
25	MW21	Jan 25, 2024		Water	S24-Ja0047510								X							
Test Counts						10	10	7	10	10	10	10	16	7	1	10	11	1	11	10

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1063458-W**
Project name WATERLOO REMEDIATION
Project ID S20743
Received Date Jan 25, 2024

Client Sample ID			G01 **MW63A**	G01 **MW63**	**IW808**	**IW807**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S24-Ja0047486**	**S24-Ja0047487**	**S24-Ja0047488**	**S24-Ja0047489**
Date Sampled			**Jan 23, 2024**	**Jan 23, 2024**	**Jan 23, 2024**	**Jan 23, 2024**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.2	-	-	< 0.001
Toluene	0.001	mg/L	< 0.2	-	-	0.004
Ethylbenzene	0.001	mg/L	< 0.2	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.4	-	-	0.003
o-Xylene	0.001	mg/L	< 0.2	-	-	0.002
Xylenes - Total*	0.003	mg/L	< 0.6	-	-	0.005
4-Bromofluorobenzene (surr.)	1	%	98	-	-	103
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	0.002
1.3-Dichlorobenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005

Client Sample ID			[G01]MW63A	[G01]MW63	IW808	IW807
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047486	S24-Ja0047487	S24-Ja0047488	S24-Ja0047489
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Carbon disulfide	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 1	< 0.05	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	1.8	0.17	< 0.001	0.003
cis-1.3-Dichloropropene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.4	< 0.02	< 0.002	0.003
Methylene Chloride	0.005	mg/L	< 2	< 0.1	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.2	< 0.01	< 0.001	0.002
Styrene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	6.4	0.43	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.2	< 0.01	< 0.001	0.004
trans-1.2-Dichloroethene	0.001	mg/L	< 0.2	< 0.01	< 0.001	0.002
trans-1.3-Dichloropropene	0.001	mg/L	< 0.2	< 0.01	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	0.29	0.033	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.2	< 0.01	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.2	0.028	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.6	< 0.03	< 0.003	0.005
Total MAH*	0.003	mg/L	< 0.4	< 0.02	< 0.003	0.009
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	8.49	0.661	< 0.005	0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	8.49	0.633	< 0.005	0.005
4-Bromofluorobenzene (surr.)	1	%	98	107	113	103
Toluene-d8 (surr.)	1	%	88	97	99	82
Ammonia (as N)	0.01	mg/L	0.33	-	-	< 0.01
Chloride	1	mg/L	13	-	-	260
Conductivity (at 25 °C)	10	uS/cm	190	-	-	1700
Dissolved Oxygen	0.1	mg/L	6.5	-	-	4.8
Nitrate & Nitrite (as N)	0.05	mg/L	0.22	-	-	0.06
Nitrate (as N)	0.02	mg/L	0.21	-	-	0.06
Nitrite (as N)	0.02	mg/L	< 0.02	-	-	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	0.37	-	-	2.2
pH (at 25 °C)	0.1	pH Units	6.7	-	-	6.6
Phosphate total (as P)	0.01	mg/L	0.02	-	-	1.1
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	-	-	< 0.05
Redox Potential mV (relative to Ag/AgCl)	1	mV	140	-	-	160
Sulphate (as SO4)	2	mg/L	2.4	-	-	13
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	110	-	-	850
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.7	-	-	2.2
Total Nitrogen (as N)*	0.2	mg/L	0.9	-	-	2.3
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	11	-	-	170

Client Sample ID			[G01]MW63A	[G01]MW63	IW808	IW807
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047486	S24-Ja0047487	S24-Ja0047488	S24-Ja0047489
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	230	-	-	610
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	< 20
Total Alkalinity (as CaCO3)	20	mg/L	230	-	-	610
Alkali Metals						
Calcium	0.5	mg/L	21	-	-	72
Magnesium	0.5	mg/L	2.2	-	-	11
Potassium	0.5	mg/L	1.4	-	-	9.0
Sodium	0.5	mg/L	8.0	-	-	220

Client Sample ID			[G01]IW507	[G01]MW127	[G01]MW126	MW611
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047490	S24-Ja0047491	S24-Ja0047492	S24-Ja0047493
Date Sampled			Jan 24, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	-	< 0.005	< 0.05	-
Toluene	0.001	mg/L	-	< 0.005	< 0.05	-
Ethylbenzene	0.001	mg/L	-	< 0.005	< 0.05	-
m&p-Xylenes	0.002	mg/L	-	< 0.01	< 0.1	-
o-Xylene	0.001	mg/L	-	< 0.005	< 0.05	-
Xylenes - Total*	0.003	mg/L	-	< 0.015	< 0.15	-
4-Bromofluorobenzene (surr.)	1	%	-	92	96	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
Allyl chloride	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Benzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Bromobenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Bromochloromethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001

Client Sample ID			[G01]IW507	[G01]MW127	[G01]MW126	MW611
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047490	S24-Ja0047491	S24-Ja0047492	S24-Ja0047493
Date Sampled			Jan 24, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromodichloromethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Bromoform	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Bromomethane	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
Carbon disulfide	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Chlorobenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Chloroethane	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
Chloroform	0.005	mg/L	< 0.1	< 0.025	< 0.25	< 0.005
Chloromethane	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	1.2	< 0.005	5.0	0.045
cis-1.3-Dichloropropene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Dibromomethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
Ethylbenzene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Iodomethane	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.04	< 0.01	< 0.1	< 0.002
Methylene Chloride	0.005	mg/L	< 0.2	< 0.05	< 0.5	< 0.005
o-Xylene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Styrene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.02	0.29	0.58	< 0.001
Toluene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.02	< 0.005	< 0.05	< 0.001
Trichloroethene	0.001	mg/L	0.039	0.005	0.054	0.004
Trichlorofluoromethane	0.005	mg/L	< 0.02	< 0.005	< 0.05	< 0.005
Vinyl chloride	0.005	mg/L	0.24	< 0.005	1.1	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.06	< 0.015	< 0.15	< 0.003
Total MAH*	0.003	mg/L	< 0.04	< 0.01	< 0.1	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	1.479	0.295	6.734	0.049
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	1.239	0.295	5.634	0.049
4-Bromofluorobenzene (surr.)	1	%	94	92	96	83
Toluene-d8 (surr.)	1	%	70	71	66	80
Ammonia (as N)	0.01	mg/L	-	[R09]8.3	7.4	-
Chloride	1	mg/L	-	61	160	-
Conductivity (at 25 °C)	10	uS/cm	-	1000	1000	-
Dissolved Oxygen	0.1	mg/L	-	4.1	5.0	-
Nitrate & Nitrite (as N)	0.05	mg/L	-	2.1	6.6	-
Nitrate (as N)	0.02	mg/L	-	2.1	6.6	-
Nitrite (as N)	0.02	mg/L	-	< 0.02	< 0.02	-
Organic Nitrogen (as N)*	0.2	mg/L	-	< 0.2	2.4	-
pH (at 25 °C)	0.1	pH Units	-	6.9	6.9	-
Phosphate total (as P)	0.01	mg/L	-	0.35	0.20	-
Phosphorus reactive (as P)	0.05	mg/L	-	< 0.05	< 0.05	-
Redox Potential mV (relative to Ag/AgCl)	1	mV	-	210	200	-
Sulphate (as SO4)	2	mg/L	-	27	100	-
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	-	750	530	-

Client Sample ID			[G01]IW507	[G01]MW127	[G01]MW126	MW611
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047490	S24-Ja0047491	S24-Ja0047492	S24-Ja0047493
Date Sampled			Jan 24, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	-	[R09]7.5	9.8	-
Total Nitrogen (as N)*	0.2	mg/L	-	9.6	16	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	-	< 5	< 5	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	860	370	-
Carbonate Alkalinity (as CaCO3)	20	mg/L	-	< 20	< 20	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	-	860	370	-
Alkali Metals						
Calcium	0.5	mg/L	-	83	97	-
Magnesium	0.5	mg/L	-	10	7.9	-
Potassium	0.5	mg/L	-	12	10	-
Sodium	0.5	mg/L	-	160	110	-
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	-	0.63	4.7	-
TRH C10-C14	0.05	mg/L	-	0.21	0.13	-
TRH C15-C28	0.1	mg/L	-	0.1	0.2	-
TRH C29-C36	0.1	mg/L	-	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	-	0.31	0.33	-
TRH C6-C10	0.02	mg/L	-	0.65	4.8	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	0.65	4.8	-
TRH >C10-C16	0.05	mg/L	-	0.28	0.18	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	0.28	< 0.5	-
TRH >C16-C34	0.1	mg/L	-	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	-	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	-	0.28	0.18	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	-	< 0.05	< 0.5	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	-	0.003	0.001	-
Acenaphthylene	0.001	mg/L	-	0.001	< 0.001	-
Anthracene	0.001	mg/L	-	< 0.001	< 0.001	-
Benz(a)anthracene	0.001	mg/L	-	< 0.001	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	-	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	-	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	-	< 0.001	< 0.001	-
Chrysene	0.001	mg/L	-	< 0.001	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	-	< 0.001	< 0.001	-
Fluoranthene	0.001	mg/L	-	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	-	0.002	0.001	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	< 0.001	< 0.001	-
Naphthalene	0.001	mg/L	-	0.001	< 0.001	-
Phenanthrene	0.001	mg/L	-	< 0.001	< 0.001	-
Pyrene	0.001	mg/L	-	< 0.001	< 0.001	-
Total PAH*	0.001	mg/L	-	0.007	0.002	-
2-Fluorobiphenyl (surr.)	1	%	-	50	58	-
p-Terphenyl-d14 (surr.)	1	%	-	97	96	-

Client Sample ID			[G01]IW507	[G01]MW127	[G01]MW126	MW611
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047490	S24-Ja0047491	S24-Ja0047492	S24-Ja0047493
Date Sampled			Jan 24, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	< 0.001	< 0.001	-
Cadmium (filtered)	0.0002	mg/L	-	< 0.0002	< 0.0002	-
Chromium (filtered)	0.001	mg/L	-	< 0.001	< 0.001	-
Copper (filtered)	0.001	mg/L	-	< 0.001	< 0.001	-
Iron (filtered)	0.05	mg/L	-	2.0	0.54	-
Lead (filtered)	0.001	mg/L	-	< 0.001	< 0.001	-
Mercury (filtered)	0.0001	mg/L	-	< 0.0001	< 0.0001	-
Nickel (filtered)	0.001	mg/L	-	< 0.001	< 0.001	-
Zinc (filtered)	0.005	mg/L	-	< 0.005	< 0.005	-

Client Sample ID			[G01]MW201	[G01]MW201A	MW206	[G01]MW128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047494	S24-Ja0047495	S24-Ja0047496	S24-Ja0047497
Date Sampled			Jan 22, 2024	Jan 22, 2024	Jan 22, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	-	-	-	< 0.1
Toluene	0.001	mg/L	-	-	-	< 0.1
Ethylbenzene	0.001	mg/L	-	-	-	< 0.1
m&p-Xylenes	0.002	mg/L	-	-	-	< 0.2
o-Xylene	0.001	mg/L	-	-	-	< 0.1
Xylenes - Total*	0.003	mg/L	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	82
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.1-Dichloroethene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.1.1-Trichloroethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.1.2-Trichloroethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.2-Dibromoethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.2-Dichlorobenzene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.2-Dichloroethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.2-Dichloropropane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.2.3-Trichloropropane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.005	< 0.005	0.015	< 0.1
1.3-Dichlorobenzene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.3-Dichloropropane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.005	< 0.005	0.002	< 0.1
1.4-Dichlorobenzene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
4-Chlorotoluene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
Allyl chloride	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Benzene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Bromobenzene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Bromochloromethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1

Client Sample ID			[G01]MW201	[G01]MW201A	MW206	[G01]MW128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047494	S24-Ja0047495	S24-Ja0047496	S24-Ja0047497
Date Sampled			Jan 22, 2024	Jan 22, 2024	Jan 22, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromodichloromethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Bromoform	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
Carbon disulfide	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Carbon Tetrachloride	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Chlorobenzene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
Chloroform	0.005	mg/L	< 0.025	< 0.025	< 0.005	< 0.5
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
cis-1.2-Dichloroethene	0.001	mg/L	0.33	0.26	0.002	0.44
cis-1.3-Dichloropropene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Dibromochloromethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Dibromomethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
Ethylbenzene	0.001	mg/L	< 0.005	< 0.005	0.003	< 0.1
Iodomethane	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.005	< 0.005	0.003	< 0.1
m&p-Xylenes	0.002	mg/L	< 0.01	< 0.01	< 0.002	< 0.2
Methylene Chloride	0.005	mg/L	< 0.05	< 0.05	< 0.005	< 1
o-Xylene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Styrene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Tetrachloroethene	0.001	mg/L	< 0.005	0.14	< 0.001	4.7
Toluene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
trans-1.2-Dichloroethene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
trans-1.3-Dichloropropene	0.001	mg/L	< 0.005	< 0.005	< 0.001	< 0.1
Trichloroethene	0.001	mg/L	< 0.005	0.023	0.001	< 0.1
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.1
Vinyl chloride	0.005	mg/L	0.092	0.023	< 0.005	< 0.1
Xylenes - Total*	0.003	mg/L	< 0.015	< 0.015	< 0.003	< 0.3
Total MAH*	0.003	mg/L	< 0.01	< 0.01	0.006	< 0.2
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	0.422	0.446	< 0.005	5.14
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	0.33	0.423	< 0.005	5.14
4-Bromofluorobenzene (surr.)	1	%	79	80	93	82
Toluene-d8 (surr.)	1	%	77	76	72	77
Ammonia (as N)	0.01	mg/L	-	-	-	< 0.01
Chloride	1	mg/L	-	-	-	14
Conductivity (at 25 °C)	10	uS/cm	-	-	-	230
Dissolved Oxygen	0.1	mg/L	-	-	-	5.7
Nitrate & Nitrite (as N)	0.05	mg/L	-	-	-	0.32
Nitrate (as N)	0.02	mg/L	-	-	-	0.31
Nitrite (as N)	0.02	mg/L	-	-	-	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	-	-	-	0.7
pH (at 25 °C)	0.1	pH Units	-	-	-	7.1
Phosphate total (as P)	0.01	mg/L	-	-	-	0.01
Phosphorus reactive (as P)	0.05	mg/L	-	-	-	< 0.05
Redox Potential mV (relative to Ag/AgCl)	1	mV	-	-	-	140
Sulphate (as SO4)	2	mg/L	-	-	-	4.3
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	-	-	-	110

Client Sample ID			[G01]MW201	[G01]MW201A	MW206	[G01]MW128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047494	S24-Ja0047495	S24-Ja0047496	S24-Ja0047497
Date Sampled			Jan 22, 2024	Jan 22, 2024	Jan 22, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	-	-	-	0.7
Total Nitrogen (as N)*	0.2	mg/L	-	-	-	1.0
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	-	-	-	< 5
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	-	-	72
Carbonate Alkalinity (as CaCO3)	20	mg/L	-	-	-	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	-	-	< 20
Total Alkalinity (as CaCO3)	20	mg/L	-	-	-	72
Alkali Metals						
Calcium	0.5	mg/L	-	-	-	24
Magnesium	0.5	mg/L	-	-	-	1.4
Potassium	0.5	mg/L	-	-	-	2.9
Sodium	0.5	mg/L	-	-	-	11
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	-	-	-	5.1
TRH C10-C14	0.05	mg/L	-	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	-	< 0.1
TRH C6-C10	0.02	mg/L	-	-	-	4.9
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	-	-	4.9
TRH >C10-C16	0.05	mg/L	-	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	-	< 0.1
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	-	-	-	< 1
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	-	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	-	71
p-Terphenyl-d14 (surr.)	1	%	-	-	-	111

Client Sample ID			[G01]MW201	[G01]MW201A	MW206	[G01]MW128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047494	S24-Ja0047495	S24-Ja0047496	S24-Ja0047497
Date Sampled			Jan 22, 2024	Jan 22, 2024	Jan 22, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	-	< 0.001
Cadmium (filtered)	0.0002	mg/L	-	-	-	< 0.0002
Chromium (filtered)	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	-	-	-	< 0.001
Iron (filtered)	0.05	mg/L	-	-	-	0.86
Lead (filtered)	0.001	mg/L	-	-	-	< 0.001
Mercury (filtered)	0.0001	mg/L	-	-	-	< 0.0001
Nickel (filtered)	0.001	mg/L	-	-	-	< 0.001
Zinc (filtered)	0.005	mg/L	-	-	-	0.010

Client Sample ID			[G01]MW125	[G01]MW129	MW64	[G01]IW809
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047498	S24-Ja0047499	S24-Ja0047500	S24-Ja0047501
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.5	< 0.2	-	-
Toluene	0.001	mg/L	< 0.5	< 0.2	-	-
Ethylbenzene	0.001	mg/L	< 0.5	< 0.2	-	-
m&p-Xylenes	0.002	mg/L	< 1	< 0.4	-	-
o-Xylene	0.001	mg/L	< 0.5	< 0.2	-	-
Xylenes - Total*	0.003	mg/L	< 1.5	< 0.6	-	-
4-Bromofluorobenzene (surr.)	1	%	80	79	-	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.1-Dichloroethene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.1.1-Trichloroethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.1.2-Trichloroethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.2-Dibromoethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.2-Dichlorobenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.2-Dichloroethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.2-Dichloropropane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.2.3-Trichloropropane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.3-Dichlorobenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.3-Dichloropropane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
1.4-Dichlorobenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
2-Butanone (MEK)	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
2-Propanone (Acetone)	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
4-Chlorotoluene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
Allyl chloride	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Benzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Bromobenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Bromochloromethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02

Client Sample ID			[G01]MW125	[G01]MW129	MW64	[G01]IW809
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047498	S24-Ja0047499	S24-Ja0047500	S24-Ja0047501
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromodichloromethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Bromoform	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Bromomethane	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
Carbon disulfide	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Carbon Tetrachloride	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Chlorobenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Chloroethane	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
Chloroform	0.005	mg/L	< 2.5	< 1	< 0.005	< 0.1
Chloromethane	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
cis-1.2-Dichloroethene	0.001	mg/L	230	3.9	0.003	0.92
cis-1.3-Dichloropropene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Dibromochloromethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Dibromomethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Dichlorodifluoromethane	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
Ethylbenzene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Iodomethane	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
m&p-Xylenes	0.002	mg/L	< 1	< 0.4	< 0.002	< 0.04
Methylene Chloride	0.005	mg/L	< 5	< 2	< 0.005	< 0.2
o-Xylene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Styrene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Tetrachloroethene	0.001	mg/L	5.0	24	0.068	< 0.02
Toluene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
trans-1.2-Dichloroethene	0.001	mg/L	< 0.5	< 0.2	< 0.001	0.027
trans-1.3-Dichloropropene	0.001	mg/L	< 0.5	< 0.2	< 0.001	< 0.02
Trichloroethene	0.001	mg/L	< 0.5	1.4	0.001	< 0.02
Trichlorofluoromethane	0.005	mg/L	< 0.5	< 0.2	< 0.005	< 0.02
Vinyl chloride	0.005	mg/L	28	0.26	< 0.005	0.70
Xylenes - Total*	0.003	mg/L	< 1.5	< 0.6	< 0.003	< 0.06
Total MAH*	0.003	mg/L	< 1	< 0.4	< 0.003	< 0.04
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	263	29.56	0.072	1.647
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	235	29.3	0.072	0.947
4-Bromofluorobenzene (surr.)	1	%	80	79	101	80
Toluene-d8 (surr.)	1	%	77	73	81	78
Ammonia (as N)	0.01	mg/L	3.0	[R09]3.8	-	-
Chloride	1	mg/L	350	14	-	89
Conductivity (at 25 °C)	10	uS/cm	1400	290	-	-
Dissolved Oxygen	0.1	mg/L	4.3	10	-	-
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	0.29	-	-
Nitrate (as N)	0.02	mg/L	0.03	0.29	-	-
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02	-	-
Organic Nitrogen (as N)*	0.2	mg/L	3.3	< 0.2	-	-
pH (at 25 °C)	0.1	pH Units	5.8	7.3	-	-
Phosphate total (as P)	0.01	mg/L	0.14	0.06	-	-
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	< 0.05	-	-
Redox Potential mV (relative to Ag/AgCl)	1	mV	84	130	-	-
Sulphate (as SO4)	2	mg/L	9.1	6.2	-	12
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	1000	180	-	-

Client Sample ID			[G01]MW125	[G01]MW129	MW64	[G01]IW809
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047498	S24-Ja0047499	S24-Ja0047500	S24-Ja0047501
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	6.3	[R09]2.9	-	-
Total Nitrogen (as N)*	0.2	mg/L	6.3	3.2	-	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	11	< 5	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	130	110	-	360
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	< 20
Total Alkalinity (as CaCO3)	20	mg/L	130	110	-	360
Alkali Metals						
Calcium	0.5	mg/L	82	36	-	75
Magnesium	0.5	mg/L	7.9	2.3	-	7.0
Potassium	0.5	mg/L	9.4	3.9	-	10
Sodium	0.5	mg/L	110	21	-	130
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	190	33	-	-
TRH C10-C14	0.05	mg/L	0.17	< 0.05	-	-
TRH C15-C28	0.1	mg/L	0.2	0.2	-	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	0.37	0.2	-	-
TRH C6-C10	0.02	mg/L	190	32	-	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	190	32	-	-
TRH >C10-C16	0.05	mg/L	0.19	0.09	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 5	< 2	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	0.19	0.19	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 5	< 2	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	59	INT	-	-
p-Terphenyl-d14 (surr.)	1	%	95	67	-	-

Client Sample ID			[G01]MW125	[G01]MW129	MW64	[G01]IW809
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047498	S24-Ja0047499	S24-Ja0047500	S24-Ja0047501
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.001	0.001	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	-	-
Chromium (filtered)	0.001	mg/L	0.001	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Iron (filtered)	0.05	mg/L	66	1.7	-	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Zinc (filtered)	0.005	mg/L	< 0.005	0.059	-	-

Client Sample ID			MW20	[G01]MW40	[G01]QC135	MW113
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047502	S24-Ja0047503	S24-Ja0047504	S24-Ja0047505
Date Sampled			Jan 24, 2024	Jan 24, 2024	Jan 24, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	-	-	< 0.005	-
Toluene	0.001	mg/L	-	-	< 0.005	-
Ethylbenzene	0.001	mg/L	-	-	< 0.005	-
m&p-Xylenes	0.002	mg/L	-	-	< 0.01	-
o-Xylene	0.001	mg/L	-	-	< 0.005	-
Xylenes - Total*	0.003	mg/L	-	-	< 0.015	-
4-Bromofluorobenzene (surr.)	1	%	-	-	89	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.01	< 0.005	0.017
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001

Client Sample ID			MW20	[G01]MW40	[G01]QC135	MW113
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047502	S24-Ja0047503	S24-Ja0047504	S24-Ja0047505
Date Sampled			Jan 24, 2024	Jan 24, 2024	Jan 24, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.05	< 0.025	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	0.002	0.68	0.007	0.008
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.01	< 0.005	0.002
Iodomethane	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.02	< 0.01	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.1	< 0.05	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	0.27	0.36	0.003
Toluene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.01	< 0.005	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	0.027	< 0.005	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.01	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	0.096	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.03	< 0.015	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.02	< 0.01	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	1.073	0.367	0.011
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	0.977	0.367	0.011
4-Bromofluorobenzene (surr.)	1	%	111	83	89	81
Toluene-d8 (surr.)	1	%	91	78	86	78
Ammonia (as N)	0.01	mg/L	-	-	6.1	-
Chloride	1	mg/L	-	-	66	-
Conductivity (at 25 °C)	10	uS/cm	-	-	680	-
Dissolved Oxygen	0.1	mg/L	-	-	3.3	-
Nitrate & Nitrite (as N)	0.05	mg/L	-	-	< 0.05	-
Nitrate (as N)	0.02	mg/L	-	-	0.03	-
Nitrite (as N)	0.02	mg/L	-	-	< 0.02	-
Organic Nitrogen (as N)*	0.2	mg/L	-	-	1.6	-
pH (at 25 °C)	0.1	pH Units	-	-	7.2	-
Phosphate total (as P)	0.01	mg/L	-	-	0.38	-
Phosphorus reactive (as P)	0.05	mg/L	-	-	< 0.05	-
Redox Potential mV (relative to Ag/AgCl)	1	mV	-	-	120	-
Sulphate (as SO4)	2	mg/L	-	-	15	-
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	-	-	650	-

Client Sample ID			MW20	[G01]MW40	[G01]QC135	MW113
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047502	S24-Ja0047503	S24-Ja0047504	S24-Ja0047505
Date Sampled			Jan 24, 2024	Jan 24, 2024	Jan 24, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	-	-	7.7	-
Total Nitrogen (as N)*	0.2	mg/L	-	-	7.7	-
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	-	-	6.2	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	-	530	-
Carbonate Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	-	-	530	-
Alkali Metals						
Calcium	0.5	mg/L	-	-	85	-
Magnesium	0.5	mg/L	-	-	11	-
Potassium	0.5	mg/L	-	-	13	-
Sodium	0.5	mg/L	-	-	160	-
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	-	-	0.38	-
TRH C10-C14	0.05	mg/L	-	-	0.15	-
TRH C15-C28	0.1	mg/L	-	-	0.1	-
TRH C29-C36	0.1	mg/L	-	-	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	-	-	0.25	-
TRH C6-C10	0.02	mg/L	-	-	0.38	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	-	0.38	-
TRH >C10-C16	0.05	mg/L	-	-	0.21	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	0.21	-
TRH >C16-C34	0.1	mg/L	-	-	< 0.1	-
TRH >C34-C40	0.1	mg/L	-	-	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	-	-	0.21	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	-	-	< 0.05	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	-	-	0.003	-
Acenaphthylene	0.001	mg/L	-	-	0.001	-
Anthracene	0.001	mg/L	-	-	< 0.001	-
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001	-
Chrysene	0.001	mg/L	-	-	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001	-
Fluoranthene	0.001	mg/L	-	-	< 0.001	-
Fluorene	0.001	mg/L	-	-	0.002	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001	-
Naphthalene	0.001	mg/L	-	-	0.001	-
Phenanthrene	0.001	mg/L	-	-	< 0.001	-
Pyrene	0.001	mg/L	-	-	< 0.001	-
Total PAH*	0.001	mg/L	-	-	0.007	-
2-Fluorobiphenyl (surr.)	1	%	-	-	70	-
p-Terphenyl-d14 (surr.)	1	%	-	-	99	-

Client Sample ID			MW20	[G01]MW40	[G01]QC135	MW113
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047502	S24-Ja0047503	S24-Ja0047504	S24-Ja0047505
Date Sampled			Jan 24, 2024	Jan 24, 2024	Jan 24, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	< 0.001	-
Cadmium (filtered)	0.0002	mg/L	-	-	< 0.0002	-
Chromium (filtered)	0.001	mg/L	-	-	< 0.001	-
Copper (filtered)	0.001	mg/L	-	-	< 0.001	-
Iron (filtered)	0.05	mg/L	-	-	2.1	-
Lead (filtered)	0.001	mg/L	-	-	< 0.001	-
Mercury (filtered)	0.0001	mg/L	-	-	< 0.0001	-
Nickel (filtered)	0.001	mg/L	-	-	< 0.001	-
Zinc (filtered)	0.005	mg/L	-	-	< 0.005	-

Client Sample ID			[G01]QC134	QC334 TB	QC434 TS	QC506
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047506	S24-Ja0047507	S24-Ja0047508	S24-Ja0047509
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.2	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.2	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.2	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.4	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.2	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.6	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	100	97	-	97
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.2	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.2	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.2	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.2	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.2	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.2	-	-	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.2	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.2	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.2	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.2	-	-	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.2	-	-	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.2	-	-	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.2	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.2	-	-	< 0.005
Allyl chloride	0.001	mg/L	< 0.2	-	-	< 0.001
Benzene	0.001	mg/L	< 0.2	-	-	< 0.001
Bromobenzene	0.001	mg/L	< 0.2	-	-	< 0.001
Bromochloromethane	0.001	mg/L	< 0.2	-	-	< 0.001

Client Sample ID			[G01]QC134	QC334 TB	QC434 TS	QC506
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047506	S24-Ja0047507	S24-Ja0047508	S24-Ja0047509
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
Bromodichloromethane	0.001	mg/L	< 0.2	-	-	< 0.001
Bromoform	0.001	mg/L	< 0.2	-	-	< 0.001
Bromomethane	0.005	mg/L	< 0.2	-	-	< 0.005
Carbon disulfide	0.001	mg/L	< 0.2	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.2	-	-	< 0.001
Chlorobenzene	0.001	mg/L	< 0.2	-	-	< 0.001
Chloroethane	0.005	mg/L	< 0.2	-	-	< 0.005
Chloroform	0.005	mg/L	< 1	-	-	< 0.005
Chloromethane	0.005	mg/L	< 0.2	-	-	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	1.9	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.2	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.2	-	-	< 0.001
Dibromomethane	0.001	mg/L	< 0.2	-	-	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.2	-	-	< 0.005
Ethylbenzene	0.001	mg/L	< 0.2	-	-	< 0.001
Iodomethane	0.001	mg/L	< 0.2	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.2	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.4	-	-	< 0.002
Methylene Chloride	0.005	mg/L	< 2	-	-	< 0.005
o-Xylene	0.001	mg/L	< 0.2	-	-	< 0.001
Styrene	0.001	mg/L	< 0.2	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	6.9	-	-	< 0.001
Toluene	0.001	mg/L	< 0.2	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.2	-	-	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.2	-	-	< 0.001
Trichloroethene	0.001	mg/L	0.31	-	-	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.2	-	-	< 0.005
Vinyl chloride	0.005	mg/L	< 0.2	-	-	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.6	-	-	< 0.003
Total MAH*	0.003	mg/L	< 0.4	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	9.11	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	9.11	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	100	-	-	97
Toluene-d8 (surr.)	1	%	90	-	-	80
Ammonia (as N)	0.01	mg/L	0.43	-	-	0.03
Chloride	1	mg/L	12	-	-	< 1
Conductivity (at 25 °C)	10	uS/cm	200	-	-	47
Dissolved Oxygen	0.1	mg/L	5.7	-	-	9.0
Nitrate & Nitrite (as N)	0.05	mg/L	0.21	-	-	< 0.05
Nitrate (as N)	0.02	mg/L	0.21	-	-	< 0.02
Nitrite (as N)	0.02	mg/L	< 0.02	-	-	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	< 0.2	-	-	< 0.2
pH (at 25 °C)	0.1	pH Units	7.3	-	-	4.2
Phosphate total (as P)	0.01	mg/L	0.03	-	-	< 0.01
Phosphorus reactive (as P)	0.05	mg/L	< 0.05	-	-	< 0.05
Redox Potential mV (relative to Ag/AgCl)	1	mV	160	-	-	410
Sulphate (as SO4)	2	mg/L	2.9	-	-	< 2
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	92	-	-	18

Client Sample ID			[G01]QC134	QC334 TB	QC434 TS	QC506
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047506	S24-Ja0047507	S24-Ja0047508	S24-Ja0047509
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.6	-	-	< 0.2
Total Nitrogen (as N)*	0.2	mg/L	0.8	-	-	< 0.2
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	< 5	-	-	< 5
Naphthalene[N02]	0.01	mg/L	-	< 0.01	-	-
TRH C6-C10	1	%	-	-	74	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	64	-	-	< 20
Carbonate Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	< 20
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	-	-	< 20
Total Alkalinity (as CaCO3)	20	mg/L	64	-	-	< 20
Alkali Metals						
Calcium	0.5	mg/L	21	-	-	< 0.5
Magnesium	0.5	mg/L	2.2	-	-	< 0.5
Potassium	0.5	mg/L	1.5	-	-	< 0.5
Sodium	0.5	mg/L	8.0	-	-	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	-	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	-	< 0.1
TRH C6-C10	0.02	mg/L	-	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	-	< 0.1
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	-	-	-	< 0.01
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	-	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	-	56
p-Terphenyl-d14 (surr.)	1	%	-	-	-	118

Client Sample ID			[G01]QC134	QC334 TB	QC434 TS	QC506
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S24-Ja0047506	S24-Ja0047507	S24-Ja0047508	S24-Ja0047509
Date Sampled			Jan 23, 2024	Jan 23, 2024	Jan 23, 2024	Jan 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	-	< 0.001
Cadmium (filtered)	0.0002	mg/L	-	-	-	< 0.0002
Chromium (filtered)	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	-	-	-	< 0.001
Iron (filtered)	0.05	mg/L	-	-	-	< 0.05
Lead (filtered)	0.001	mg/L	-	-	-	< 0.001
Mercury (filtered)	0.0001	mg/L	-	-	-	< 0.0001
Nickel (filtered)	0.001	mg/L	-	-	-	< 0.001
Zinc (filtered)	0.005	mg/L	-	-	-	< 0.005
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	70	-
TRH C6-C9	1	%	-	-	79	-
BTEX						
Benzene	1	%	-	-	90	-
Ethylbenzene	1	%	-	-	77	-
m&p-Xylenes	1	%	-	-	82	-
o-Xylene	1	%	-	-	72	-
Toluene	1	%	-	-	75	-
Xylenes - Total	1	%	-	-	76	-
4-Bromofluorobenzene (surr.)	1	%	-	-	98	-

Client Sample ID			MW21
Sample Matrix			Water
Eurofins Sample No.			S24-Ja0047510
Date Sampled			Jan 25, 2024
Test/Reference	LOR	Unit	
Volatile Organics			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005
Allyl chloride	0.001	mg/L	< 0.001

Client Sample ID			MW21
Sample Matrix			Water
Eurofins Sample No.			S24-Ja0047510
Date Sampled			Jan 25, 2024
Test/Reference	LOR	Unit	
Volatile Organics			
Benzene	0.001	mg/L	< 0.001
Bromobenzene	0.001	mg/L	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.005	mg/L	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroethane	0.005	mg/L	< 0.005
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.005	mg/L	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005
o-Xylene	0.001	mg/L	< 0.001
Styrene	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003
Total MAH*	0.003	mg/L	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005
4-Bromofluorobenzene (surr.)	1	%	98
Toluene-d8 (surr.)	1	%	79

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
BTEX	Sydney	Jan 30, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Feb 01, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 01, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Jan 30, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Feb 01, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 01, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 30, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8 filtered	Sydney	Jan 30, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P			
Ammonia (as N)	Melbourne	Jan 31, 2024	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrate & Nitrite (as N)	Melbourne	Jan 31, 2024	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrate (as N)	Melbourne	Jan 31, 2024	28 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Nitrite (as N)	Melbourne	Jan 31, 2024	2 Days
- Method: LTM-INO-4450 Determination of Nitrogen Species by Discrete Analyser			
Organic Nitrogen (as N)*	Melbourne	Jan 30, 2024	7 Days
- Method: APHA 4500 Organic Nitrogen (N)			
Phosphate total (as P)	Sydney	Feb 01, 2024	28 Days
- Method: E052 Total Phosphate (as P)			
Phosphorus reactive (as P)	Sydney	Feb 01, 2024	28 Days
- Method: E052 Reactive phosphate (as P)			
Total Kjeldahl Nitrogen (as N)	Melbourne	Jan 31, 2024	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Sydney	Feb 01, 2024	28 Days
- Method: LTM-INO-4270 Anions by Ion Chromatography			
Sulphate (as SO4)	Sydney	Feb 01, 2024	28 Days
- Method: In-house method LTM-INO-4270 Sulphate by Ion Chromatograph			
Alkalinity (speciated)	Sydney	Feb 01, 2024	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Conductivity (at 25 °C)	Sydney	Feb 01, 2024	28 Days
- Method: LTM-INO-4030 Conductivity			
Dissolved Oxygen	Sydney	Feb 01, 2024	1 Days
- Method: LTM-INO-4130 Determination of Dissolved Oxygen using a DO meter			
pH (at 25 °C)	Sydney	Feb 01, 2024	0 Hour
- Method: LTM-GEN-7090 pH in water by ISE			
Redox Potential mV (relative to Ag/AgCl)	Melbourne	Feb 01, 2024	5 Days
- Method: APHA 2580B Redox Potential			
Total Suspended Solids Dried at 103 °C to 105 °C	Sydney	Feb 01, 2024	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Eurofins Suite B11C: Na/K/Ca/Mg	Melbourne	Jan 31, 2024	180 Days

Description	Testing Site	Extracted	Holding Time
- Method: LTM-MET-3040 METALS IN WATERS, SOLIDS,			
Heavy Metals (filtered)	Sydney	Feb 01, 2024	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Sydney	Feb 01, 2024	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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WA 6106
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NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1063458
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Jan 25, 2024 4:55 PM
Due: Feb 2, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: WATERLOO REMEDIATION
Project ID: S20743

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail	Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	BTEX	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254					X						X			X	
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X		X	X	X	X	X	X	X	X		X
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID														
1	MW63A	Jan 23, 2024		Water	S24-Ja0047486	X	X		X	X	X	X	X			X	X		X	X
2	MW63	Jan 23, 2024		Water	S24-Ja0047487								X							
3	IW808	Jan 23, 2024		Water	S24-Ja0047488								X							
4	IW807	Jan 23, 2024		Water	S24-Ja0047489	X	X		X	X	X	X	X			X	X		X	X
5	IW507	Jan 24, 2024		Water	S24-Ja0047490								X							
6	MW127	Jan 23, 2024		Water	S24-Ja0047491	X	X	X	X	X	X	X		X		X	X		X	X
7	MW126	Jan 23, 2024		Water	S24-Ja0047492	X	X	X	X	X	X	X		X		X	X		X	X
8	MW611	Jan 23, 2024		Water	S24-Ja0047493								X							
9	MW201	Jan 22, 2024		Water	S24-Ja0047494								X							
10	MW201A	Jan 22, 2024		Water	S24-Ja0047495								X							
11	MW206	Jan 22, 2024		Water	S24-Ja0047496								X							
12	MW128	Jan 23, 2024		Water	S24-Ja0047497	X	X	X	X	X	X	X		X		X	X		X	X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Sample Detail						Conductivity (at 25 °C)	Dissolved Oxygen	Iron (filtered)	pH (at 25 °C)	Redox Potential mV (relative to Ag/AgCl)	Total Suspended Solids Dried at 103 °C to 105 °C	BTEX	Volatile Organics	Eurofins Suite B8 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B19E: Total N, TKN, NOx, NO2, NO3, NH3, Total P, Reactive P	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C
Melbourne Laboratory - NATA # 1261 Site # 1254										X						X			X	
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X		X	X	X	X	X	X	X	X		X
13	MW125	Jan 23, 2024		Water	S24-Ja0047498	X	X	X	X	X	X	X		X		X	X		X	X
14	MW129	Jan 23, 2024		Water	S24-Ja0047499	X	X	X	X	X	X	X		X		X	X		X	X
15	MW64	Jan 23, 2024		Water	S24-Ja0047500								X							
16	IW809	Jan 23, 2024		Water	S24-Ja0047501								X				X		X	
17	MW20	Jan 24, 2024		Water	S24-Ja0047502								X							
18	MW40	Jan 24, 2024		Water	S24-Ja0047503								X							
19	QC135	Jan 24, 2024		Water	S24-Ja0047504	X	X	X	X	X	X	X		X		X	X		X	X
20	MW113	Jan 23, 2024		Water	S24-Ja0047505								X							
21	QC134	Jan 23, 2024		Water	S24-Ja0047506	X	X		X	X	X	X	X			X	X		X	X
22	QC334 TB	Jan 23, 2024		Water	S24-Ja0047507										X					
23	QC434 TS	Jan 23, 2024		Water	S24-Ja0047508													X		
24	QC506	Jan 23, 2024		Water	S24-Ja0047509	X	X	X	X	X	X	X		X		X	X		X	X
25	MW21	Jan 25, 2024		Water	S24-Ja0047510								X							
Test Counts						10	10	7	10	10	10	10	16	7	1	10	11	1	11	10

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They 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 weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 5.4, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Conductivity (at 25 °C)	uS/cm	< 10			10	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Nitrate (as N)	mg/L	< 0.02			0.02	Pass	
Nitrite (as N)	mg/L	< 0.02			0.02	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 10			10	Pass	
Total Kjeldahl Nitrogen (as N)	mg/L	< 0.2			0.2	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	mg/L	< 5			5	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	112			70-130	Pass	
Toluene	%	109			70-130	Pass	
Ethylbenzene	%	104			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	106			70-130	Pass	
Xylenes - Total*	%	105			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	100			70-130	Pass	
1.1.1-Trichloroethane	%	99			70-130	Pass	
1.2-Dichlorobenzene	%	106			70-130	Pass	
1.2-Dichloroethane	%	125			70-130	Pass	
Benzene	%	82			70-130	Pass	
Ethylbenzene	%	88			70-130	Pass	
m&p-Xylenes	%	83			70-130	Pass	
o-Xylene	%	80			70-130	Pass	
Toluene	%	75			70-130	Pass	
Trichloroethene	%	79			70-130	Pass	
Xylenes - Total*	%	82			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	122			70-130	Pass	
Conductivity (at 25 °C)	%	96			70-130	Pass	
Nitrate & Nitrite (as N)	%	102			70-130	Pass	
Nitrite (as N)	%	111			70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	105			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	87			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	%	99			70-130	Pass	
Naphthalene	%	109			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Bicarbonate Alkalinity (as CaCO3)	%	121			70-130	Pass	
Hydroxide Alkalinity (as CaCO3)	%	121			70-130	Pass	
Total Alkalinity (as CaCO3)	%	121			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	98			80-120	Pass	
Magnesium	%	104			80-120	Pass	
Potassium	%	99			80-120	Pass	
Sodium	%	101			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	96			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	112			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	109			70-130	Pass	
Acenaphthylene	%	106			70-130	Pass	
Anthracene	%	117			70-130	Pass	
Benz(a)anthracene	%	107			70-130	Pass	
Benzo(a)pyrene	%	111			70-130	Pass	
Benzo(b&j)fluoranthene	%	108			70-130	Pass	
Benzo(g.h.i)perylene	%	111			70-130	Pass	
Benzo(k)fluoranthene	%	122			70-130	Pass	
Chrysene	%	114			70-130	Pass	
Dibenz(a.h)anthracene	%	113			70-130	Pass	
Fluoranthene	%	115			70-130	Pass	
Fluorene	%	115			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	112			70-130	Pass	
Naphthalene	%	83			70-130	Pass	
Phenanthrene	%	122			70-130	Pass	
Pyrene	%	115			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	94			80-120	Pass	
Cadmium (filtered)	%	95			80-120	Pass	
Chromium (filtered)	%	91			80-120	Pass	
Copper (filtered)	%	90			80-120	Pass	
Iron (filtered)	%	100			80-120	Pass	
Lead (filtered)	%	91			80-120	Pass	
Mercury (filtered)	%	88			80-120	Pass	
Nickel (filtered)	%	88			80-120	Pass	
Zinc (filtered)	%	91			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M24-Ja0045554	NCP	%	108			70-130	Pass	
Nitrite (as N)	M24-Ja0045554	NCP	%	110			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S24-Ja0047486	CP	%	92			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M24-Ja0045560	NCP	%	98			75-125	Pass	
Magnesium	M24-Ja0045560	NCP	%	103			75-125	Pass	
Potassium	M24-Ja0045560	NCP	%	101			75-125	Pass	
Sodium	M24-Ja0045560	NCP	%	102			75-125	Pass	
Spike - % Recovery									
				Result 1					
Total Kjeldahl Nitrogen (as N)	S24-Ja0047491	CP	%	99			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Ja0047057	NCP	%	77			70-130	Pass	
TRH >C10-C16	S24-Ja0047057	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S24-Ja0047261	NCP	%	87			75-125	Pass	
Cadmium (filtered)	S24-Ja0047261	NCP	%	86			75-125	Pass	
Chromium (filtered)	S24-Ja0047261	NCP	%	81			75-125	Pass	
Copper (filtered)	N24-Ja0050835	NCP	%	94			75-125	Pass	
Iron (filtered)	S24-Ja0047261	NCP	%	90			75-125	Pass	
Lead (filtered)	S24-Ja0047261	NCP	%	80			75-125	Pass	
Mercury (filtered)	N24-Ja0050835	NCP	%	94			75-125	Pass	
Nickel (filtered)	N24-Ja0050835	NCP	%	97			75-125	Pass	
Zinc (filtered)	S24-Ja0047261	NCP	%	81			75-125	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-Ja0047507	CP	%	95			70-130	Pass	
Toluene	S24-Ja0047507	CP	%	100			70-130	Pass	
Ethylbenzene	S24-Ja0047507	CP	%	96			70-130	Pass	
m&p-Xylenes	S24-Ja0047507	CP	%	96			70-130	Pass	
o-Xylene	S24-Ja0047507	CP	%	95			70-130	Pass	
Xylenes - Total*	S24-Ja0047507	CP	%	96			70-130	Pass	
Spike - % Recovery									
				Result 1					
Naphthalene	S24-Ja0047507	CP	%	90			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-Ja0047507	CP	%	95			70-130	Pass	
TRH C6-C10	S24-Ja0047507	CP	%	87			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	M24-Ja0045023	NCP	mg/L	0.01	< 0.01	<1	30%	Pass	
Conductivity (at 25 °C)	S24-Ja0047486	CP	uS/cm	190	190	1.6	30%	Pass	
Nitrate & Nitrite (as N)	M24-Ja0047538	NCP	mg/L	1.4	1.4	1.0	30%	Pass	
Nitrite (as N)	M24-Ja0047538	NCP	mg/L	0.08	0.08	<1	30%	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S24-Ja0047486	CP	mg/L	11	12	14	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M24-Ja0045560	NCP	mg/L	14	15	1.1	30%	Pass	
Magnesium	M24-Ja0045560	NCP	mg/L	35	36	1.5	30%	Pass	
Potassium	M24-Ja0045560	NCP	mg/L	19	19	3.5	30%	Pass	
Sodium	M24-Ja0045560	NCP	mg/L	300	300	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Total Kjeldahl Nitrogen (as N)	S24-Ja0047489	CP	mg/L	2.2	1.8	20	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Total Dissolved Solids Dried at 180 °C ± 2 °C	S24-Ja0047491	CP	mg/L	750	760	1.6	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-Ja0034445	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S24-Ja0034445	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S24-Ja0034445	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	S24-Ja0034445	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S24-Ja0034445	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S24-Ja0034445	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S24-Ja0047262	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S24-Ja0047262	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25 °C)	S24-Ja0047498	CP	uS/cm	1400	1400	2.7	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25 °C)	S24-Ja0047499	CP	uS/cm	290	340	18	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S24-Ja0047499	CP	mg/L	110	120	7.3	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S24-Ja0047499	CP	mg/L	< 20	< 20	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S24-Ja0047499	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S24-Ja0047499	CP	mg/L	110	120	7.3	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Redox Potential mV (relative to Ag/AgCl)	S24-Ja0047504	CP	mV	120	190	5.2	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-Ja0049100	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S24-Ja0049100	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S24-Ja0049100	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-Ja0049100	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S24-Ja0049100	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S24-Ja0049100	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Naphthalene	S24-Ja0049100	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Ja0049100	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S24-Ja0049100	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Cadmium (filtered)	S24-Ja0047509	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S24-Ja0047509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S24-Ja0047509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iron (filtered)	S24-Ja0047509	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead (filtered)	S24-Ja0047509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel (filtered)	S24-Ja0047509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S24-Ja0047509	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
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
R09	Theoretically the TKN result should be greater or equal to the ammonia concentration. However the difference reported is within the measurement uncertainty of the individual tests

Authorised by:

Adam Bateup	Analytical Services Manager
Dilani Samarakoon	Senior Analyst-Inorganic
Emily Rosenberg	Senior Analyst-Metal
Mary Makarios	Senior Analyst-Inorganic
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic



Glenn Jackson
Managing Director

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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Chain of Custody Documentation

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Laboratory: ALS NSW
Address:
Contact: Sample Receipt
Phone:

Job Number:	S19142	**Purchase Order:**		
Project Name:	Lawrence drycleaners TSP014	**Quote No:**	230515Senn-1	
Sampled By:	Bec Chapple	**Turn Around Time:**	Standard	
Project Manager:	Matt Beasley	**Page:**	1	of 1
Email Report To:	Matt.Beasley@senversa.com.au Matthew.linz@senversa.com Bec.chapple@senversa.com.au	**Phone/Mobile:**	0435 895 069	

Sample Information					Container Information		Analysis Required											
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles	VOCs	BTEXN									HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
	MW122	Water	1/03/2024	AM	2xVOA, 1xP, 1xN, 1xSP, 1xUA	6	x											Esdat files required please
	QC348	Water	1/03/2024	AM	1 x VOA	1	x											TB
	QC448	Water	1/03/2024	AM	1 x VOA	1		x										TS
																		B10A = 8 metals, TRH, BTEX
Total						1												

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: Bec Chapple **Signature:** BC **Date:** 1/03/2024

Relinquished By: Bec Chapple		**Method of Shipment (if applicable):**	**Received by:**	
Name/Signature:	1/03/2024	Carrier / Reference #:	Name/Signature:	Date: 1/3/24
Of:	Time:	Date/Time:	Of:	Time: 15:41
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

1074347

2.1

Completed by: _____
Checked by:

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

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WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Senversa Pty Ltd NSW
Contact name:	Matt Beasley
Project name:	LAWRENCE DRYCLEANERS TSP014
Project ID:	S19142
Turnaround time:	5 Day
Date/Time received	Mar 1, 2024 11:51 AM
Eurofins reference	1074347

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:

Adam Bateup on phone : or by email: AdamBateup@eurofins.com

Results will be delivered electronically via email to Matt Beasley - matt.beasley@senversa.com.au.

Note: A copy of these results will also be delivered to the general Senversa Pty Ltd NSW email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1074347
Phone: 02 9994 8016
Fax: 03 9606 0074

Received: Mar 1, 2024 11:51 AM
Due: Mar 8, 2024
Priority: 5 Day
Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS TSP014
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Volatile Organics	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	MW122	Mar 01, 2024		Water	S24-Ma0003544	X		
2	QC348(TB)	Mar 01, 2024		Water	S24-Ma0003545		X	
3	QC448(TS)	Mar 01, 2024		Water	S24-Ma0003546			X
Test Counts						1	1	1

Senversa Pty Ltd NSW
Level 24, 1 Market Street
SYDNEY
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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.

Attention: **Matt Beasley**

Report **1074347-W**
Project name LAWRENCE DRYCLEANERS TSP014
Project ID S19142
Received Date Mar 01, 2024

Client Sample ID			**MW122**	**QC348(TB)**	**QC448(TS)**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S24-Ma0003544**	**S24-Ma0003545**	**S24-Ma0003546**
Date Sampled			**Mar 01, 2024**	**Mar 01, 2024**	**Mar 01, 2024**
Test/Reference	LOR	Unit			
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
2-Butanone (MEK)	0.005	mg/L	< 0.005	-	-
2-Propanone (Acetone)	0.005	mg/L	< 0.005	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	-	-
Allyl chloride	0.001	mg/L	< 0.001	-	-
Benzene	0.001	mg/L	< 0.001	-	-
Bromobenzene	0.001	mg/L	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	-	-
Bromoform	0.001	mg/L	< 0.001	-	-
Bromomethane	0.005	mg/L	< 0.005	-	-
Carbon disulfide	0.001	mg/L	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	-	-
Chloroethane	0.005	mg/L	< 0.005	-	-
Chloroform	0.005	mg/L	< 0.005	-	-
Chloromethane	0.005	mg/L	< 0.005	-	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-

Client Sample ID			MW122	QC348(TB)	QC448(TS)
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S24-Ma0003544	S24-Ma0003545	S24-Ma0003546
Date Sampled			Mar 01, 2024	Mar 01, 2024	Mar 01, 2024
Test/Reference	LOR	Unit			
Volatile Organics					
Dibromochloromethane	0.001	mg/L	< 0.001	-	-
Dibromomethane	0.001	mg/L	< 0.001	-	-
Dichlorodifluoromethane	0.005	mg/L	< 0.005	-	-
Ethylbenzene	0.001	mg/L	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	-
Methylene Chloride	0.005	mg/L	< 0.005	-	-
o-Xylene	0.001	mg/L	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	-	-
Trichlorofluoromethane	0.005	mg/L	< 0.005	-	-
Vinyl chloride	0.005	mg/L	< 0.005	-	-
Xylenes - Total*	0.003	mg/L	< 0.003	-	-
Total MAH*	0.003	mg/L	< 0.003	-	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	-	-
4-Bromofluorobenzene (surr.)	1	%	99	-	-
Toluene-d8 (surr.)	1	%	79	-	-
Naphthalene[N02]	0.01	mg/L	-	< 0.01	-
TRH C6-C10	1	%	-	-	79
Total Recoverable Hydrocarbons					
TRH C6-C9	0.02	mg/L	-	< 0.02	-
TRH C6-C10	0.02	mg/L	-	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	< 0.02	-
BTEX					
Benzene	0.001	mg/L	-	< 0.001	-
Toluene	0.001	mg/L	-	< 0.001	-
Ethylbenzene	0.001	mg/L	-	< 0.001	-
m&p-Xylenes	0.002	mg/L	-	< 0.002	-
o-Xylene	0.001	mg/L	-	< 0.001	-
Xylenes - Total*	0.003	mg/L	-	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	-	71	-
Total Recoverable Hydrocarbons					
Naphthalene	1	%	-	-	100
TRH C6-C9	1	%	-	-	81
BTEX					
Benzene	1	%	-	-	110
Ethylbenzene	1	%	-	-	100
m&p-Xylenes	1	%	-	-	110
o-Xylene	1	%	-	-	110
Toluene	1	%	-	-	100
Xylenes - Total	1	%	-	-	110
4-Bromofluorobenzene (surr.)	1	%	-	-	73

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
Volatile Organics	Sydney	Mar 08, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Mar 02, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Mar 02, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Mar 02, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			

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

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Senversa Pty Ltd NSW
Address: Level 24, 1 Market Street
SYDNEY
NSW 2000

Order No.:
Report #: 1074347
Phone: 02 9994 8016
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Received: Mar 1, 2024 11:51 AM
Due: Mar 8, 2024
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Contact Name: Matt Beasley

Project Name: LAWRENCE DRYCLEANERS TSP014
Project ID: S19142

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Volatile Organics	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	MW122	Mar 01, 2024		Water	S24-Ma0003544	X		
2	QC348(TB)	Mar 01, 2024		Water	S24-Ma0003545		X	
3	QC448(TS)	Mar 01, 2024		Water	S24-Ma0003546			X
Test Counts						1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony forming unit	**Colour:** Pt-Co Units	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
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 6.0
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 70 – 130%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	82			70-130	Pass	
1.1.1-Trichloroethane	%	81			70-130	Pass	
1.2-Dichlorobenzene	%	117			70-130	Pass	
1.2-Dichloroethane	%	89			70-130	Pass	
Benzene	%	120			70-130	Pass	
Ethylbenzene	%	122			70-130	Pass	
m&p-Xylenes	%	119			70-130	Pass	
o-Xylene	%	115			70-130	Pass	
Toluene	%	123			70-130	Pass	
Trichloroethene	%	108			70-130	Pass	
Xylenes - Total*	%	118			70-130	Pass	
LCS - % Recovery							
Naphthalene	%	91			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	98			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	N24-Fe0062097	NCP	%	78			70-130	Pass	
1.2-Dichlorobenzene	N24-Fe0062097	NCP	%	117			70-130	Pass	
Benzene	N24-Fe0062097	NCP	%	92			70-130	Pass	
Ethylbenzene	N24-Fe0062097	NCP	%	112			70-130	Pass	
m&p-Xylenes	N24-Fe0062097	NCP	%	113			70-130	Pass	
o-Xylene	N24-Fe0062097	NCP	%	109			70-130	Pass	
Toluene	N24-Fe0062097	NCP	%	109			70-130	Pass	
Trichloroethene	N24-Fe0062097	NCP	%	84			70-130	Pass	
Xylenes - Total*	N24-Fe0062097	NCP	%	112			70-130	Pass	
Spike - % Recovery									
				Result 1					
Naphthalene	W24-Ma0007682	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	W24-Ma0007682	NCP	%	96			70-130	Pass	
TRH C6-C10	W24-Ma0007682	NCP	%	95			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1.1.2-Tetrachloroethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Propanone (Acetone)	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chlorotoluene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Allyl chloride	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Carbon disulfide	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloroform	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
cis-1.2-Dichloroethene	S24-Ma0004350	NCP	mg/L	1.9	1.8	6.4	30%	Pass	
cis-1.3-Dichloropropene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Ethylbenzene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-Ma0004350	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methylene Chloride	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
o-Xylene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S24-Ma0004350	NCP	mg/L	0.033	0.030	10	30%	Pass	
Toluene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S24-Ma0004350	NCP	mg/L	0.015	0.016	2.9	30%	Pass	
trans-1.3-Dichloropropene	S24-Ma0004350	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S24-Ma0004350	NCP	mg/L	0.041	0.037	11	30%	Pass	
Trichlorofluoromethane	S24-Ma0004350	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Vinyl chloride	S24-Ma0004350	NCP	mg/L	0.073	0.067	8.2	30%	Pass	
Xylenes - Total*	S24-Ma0004350	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Naphthalene	W24-Ma0007685	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	W24-Ma0007685	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	W24-Ma0007685	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	

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

Qualifier Codes/Comments

Code	Description
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.

Authorised by:

Adam Bateup	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile

Glenn Jackson
Managing Director

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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CERTIFICATE OF ANALYSIS

Work Order	: **ES2343750**	Page	: 1 of 9
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation	Date Samples Received	: 15-Dec-2023 18:06
Order number	: 230515SENN	Date Analysis Commenced	: 16-Dec-2023
C-O-C number	: ----	Issue Date	: 22-Dec-2023 15:53
Sampler	: RF		
Site	: Waterloo		
Quote number	: EN/000		
No. of samples received	: 1		
No. of samples analysed	: 1		

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
- 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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 Contract 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.

- 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.
- EP080: 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, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- 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.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- 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.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC224	----	----	----	----
				Sampling date / time	15-Dec-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2343750-001	--------	--------	--------	--------
					Result	----	----	----	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.70**	----	----	----	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**1100**	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**710**	----	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		**100**	----	----	----	----
EA075: Redox Potential									
Redox Potential	----	0.1	mV		**98.0**	----	----	----	----
pH Redox	----	0.01	pH Unit		**6.64**	----	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**581**	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**581**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**15**	----	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**36**	----	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**101**	----	----	----	----
Magnesium	7439-95-4	1	mg/L		**8**	----	----	----	----
Sodium	7440-23-5	1	mg/L		**163**	----	----	----	----
Potassium	7440-09-7	1	mg/L		**5**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		**0.001**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		**0.001**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC224	----	----	----	----
				Sampling date / time	15-Dec-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2343750-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.002**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.006**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**10.9**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**3.76**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.02**	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**9.7**	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**9.7**	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.87**	----	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		**0.01**	----	----	----	----
EN055: Ionic Balance									
ø **Total Anions**	----	0.01	meq/L		**12.9**	----	----	----	----
ø **Total Cations**	----	0.01	meq/L		**12.9**	----	----	----	----
ø **Ionic Balance**	----	0.01	%		**0.08**	----	----	----	----
EP025: Oxygen - Dissolved (DO)									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC224	----	----	----	----
				Sampling date / time	15-Dec-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2343750-001	--------	--------	--------	--------
					Result	----	----	----	----
EP025: Oxygen - Dissolved (DO) - Continued									
Dissolved Oxygen	----	0.1	mg/L		**6.9**	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC224	----	----	----	----
				Sampling date / time	15-Dec-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2343750-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074D: Fumigants - Continued									
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	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC224	----	----	----	----
				Sampling date / time	15-Dec-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2343750-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
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	----	----	----	----
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	%		**103**	----	----	----	----
Toluene-D8	2037-26-5	5	%		**110**	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		**106**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**98.8**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC224	----	----	----	----
				Sampling date / time	15-Dec-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2343750-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	2	%		**113**	**----**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	2	%		**125**	**----**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137

QUALITY CONTROL REPORT

Work Order	: **ES2343750**	Page	: 1 of 14
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation	Date Samples Received	: 15-Dec-2023
Order number	: 230515SENN	Date Analysis Commenced	: 16-Dec-2023
C-O-C number	: ----	Issue Date	: 22-Dec-2023
Sampler	: RF		
Site	: Waterloo		
Quote number	: EN/000		
No. of samples received	: 1		
No. of samples analysed	: 1		

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA005P: pH by PC Titrator (QC Lot: 5498368)									
ES2343218-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.32	7.29	0.4	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 5498369)									
ES2343613-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	<1	0.0	No Limit
ES2343218-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1730	1720	0.3	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 5508295)									
ES2343432-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	1360	1330	2.4	0% - 20%
ES2343779-004	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	31400	32000	1.7	0% - 20%
EW2305627-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	238	239	0.6	0% - 20%
EW2305630-003	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	40	50	22.3	No Limit
EA025: Total Suspended Solids dried at 104 ± 2°C (QC Lot: 5508296)									
ES2343432-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	82	76	7.6	0% - 50%
ES2343779-004	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	50	56	12.3	0% - 50%
EW2305627-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	<5	<5	0.0	No Limit
EW2305630-003	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	<5	<5	0.0	No Limit
EA075: Redox Potential (QC Lot: 5500420)									
ES2343129-001	Anonymous	EA075: Redox Potential	----	0.1	mV	247	244	0.9	0% - 20%
		EA075: pH Redox	----	0.01	pH Unit	5.64	5.59	0.9	0% - 20%
ES2343750-001	QC224	EA075: Redox Potential	----	0.1	mV	98.0	93.5	4.7	0% - 20%
		EA075: pH Redox	----	0.01	pH Unit	6.64	6.64	0.0	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 5498371)									

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 (%)*
ED037P: Alkalinity by PC Titrator (QC Lot: 5498371) - continued									
ES2343613-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	<1	0.0	No Limit
ES2343218-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	289	286	0.9	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	289	286	0.9	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 5497647)									
EW2305625-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	2	2	0.0	No Limit
ES2343593-010	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	7	7	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 5497650)									
ES2343598-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	32	32	0.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 5505646)									
ES2343750-001	QC224	ED093F: Calcium	7440-70-2	1	mg/L	101	102	1.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	8	8	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	163	164	0.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	5	5	0.0	No Limit
ME2302279-004	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	75	75	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	46	46	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	148	148	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	3	3	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 5505645)									
ES2343783-001	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	0.007	0.006	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.005	0.007	22.2	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	2.23	1.85	18.9	0% - 20%
ES2343750-001	QC224	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: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		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: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	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: 5505645) - continued									
ES2343750-001	QC224	EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.006	<0.005	19.2	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	10.9	11.0	0.6	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 5505644)									
ES2343783-003	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2343783-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 5504691)									
ES2343686-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01 (0.10)*	mg/L	1.45	1.22	17.2	0% - 50%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 5497648)									
ES2343745-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01 (2.00)*	mg/L	<2.00	<2.00	0.0	No Limit
ES2343593-010	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 5504690)									
ES2343715-036	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	1.33	1.39	4.6	0% - 20%
ES2343686-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 5504695)									
ES2343630-017	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	0.2	0.0	No Limit
ES2343690-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.1	<0.1	0.0	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 5504694)									
ES2343630-017	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.05	0.04	0.0	No Limit
ES2343690-001	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.06	0.07	18.0	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 5497649)									
EW2305602-011	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.01	0.02	0.0	No Limit
ES2343598-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5500720)									
ES2343680-004	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

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: 5500720) - continued									
ES2343680-004	Anonymous	EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
ES2343594-001	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
EP074B: Oxygenated Compounds (QC Lot: 5500720)									
ES2343680-004	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
ES2343594-001	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: 5500720)									
ES2343680-004	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
ES2343594-001	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5500720)									
ES2343680-004	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
ES2343594-001	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

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 (%)*
EP074D: Fumigants (QC Lot: 5500720) - continued									
ES2343594-001	Anonymous	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: 5500720)									
ES2343680-004	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
		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
ES2343594-001	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

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: 5500720) - continued									
ES2343594-001	Anonymous	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
EP074F: Halogenated Aromatic Compounds (QC Lot: 5500720)									
ES2343680-004	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
ES2343594-001	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

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 (%)*
EP074F: Halogenated Aromatic Compounds (QC Lot: 5500720) - continued									
ES2343594-001	Anonymous	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: 5500720)									
ES2343680-004	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
ES2343594-001	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: 5500720)									
ES2343680-004	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2343594-001	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	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: **WATER**

				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
EA005P: pH by PC Titrator (QCLot: 5498368)								
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	100	98.8	101
				----	7 pH Unit	99.7	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 5498369)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	98.0	89.9	110
				<1	2100 µS/cm	98.4	90.2	111
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 5508295)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	96.7	87.0	109
				<10	293 mg/L	101	75.2	126
				<10	2470 mg/L	97.9	83.0	124
EA025: Total Suspended Solids dried at 104 ± 2°C (QCLot: 5508296)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	102	83.0	129
				<5	1000 mg/L	93.2	82.0	110
				<5	841 mg/L	105	83.0	118
EA075: Redox Potential (QCLot: 5500420)								
EA075: Redox Potential	----	----	mV	----	234 mV	99.9	96.0	106
				----	300 mV	100	97.0	105
				----	86 mV	107	97.0	115
ED037P: Alkalinity by PC Titrator (QCLot: 5498371)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	93.5	81.0	115
				----	50 mg/L	97.9	80.0	120
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 5497647)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	101	82.0	122
				<1	500 mg/L	99.9	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 5497650)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	96.6	80.9	127
				<1	1000 mg/L	98.4	80.9	127
ED093F: Dissolved Major Cations (QCLot: 5505646)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	104	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	104	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	106	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	97.7	85.0	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: 5505645)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	98.2	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.2	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.4	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	95.3	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	96.1	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	95.2	82.0	112
EG035F: Dissolved Mercury by FIMS (QCLot: 5505644)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	94.8	83.0	105
EK055G: Ammonia as N by Discrete Analyser (QCLot: 5504691)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	94.5	90.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 5497648)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	99.5	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 5504690)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	94.3	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 5504695)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	10 mg/L	80.8	69.0	101
				<0.1	1 mg/L	85.9	70.0	118
				<0.1	5 mg/L	86.4	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 5504694)								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	4.42 mg/L	92.2	71.3	126
				<0.01	0.442 mg/L	105	71.3	126
				<0.01	1 mg/L	106	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 5497649)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	102	85.0	117
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5500720)								
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	96.5	77.0	119
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	101	69.0	129
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	93.8	76.0	118
EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	96.2	77.0	119
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	90.5	73.0	119
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	98.5	79.0	117

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
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5500720) - continued								
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	96.1	76.0	118
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	90.4	69.0	119
EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	93.8	74.0	116
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	94.6	73.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	93.9	74.0	116
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	93.5	72.0	116
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	94.0	71.0	119
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	91.3	65.0	123
EP074B: Oxygenated Compounds (QCLot: 5500720)								
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	100 µg/L	103	61.4	134
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	100 µg/L	104	73.6	130
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	100 µg/L	93.3	66.0	132
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	100 µg/L	100	65.0	137
EP074C: Sulfonated Compounds (QCLot: 5500720)								
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	10 µg/L	90.3	72.8	127
EP074D: Fumigants (QCLot: 5500720)								
EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	91.7	68.0	122
EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	91.3	76.0	118
EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	89.4	62.0	120
EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	88.9	60.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	104	69.0	117
EP074E: Halogenated Aliphatic Compounds (QCLot: 5500720)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	88.3	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	98.3	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	89.6	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	86.3	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	93.3	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	93.5	69.0	131
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	92.0	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	72.6	70.2	128
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	94.0	74.0	118
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	98.0	74.0	120
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	99.1	77.0	119
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	90.2	67.0	119

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: 5500720) - continued								
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	91.1	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	90.2	62.0	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	98.3	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	95.4	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	95.3	73.0	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	107	72.0	126
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	102	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	113	72.0	124
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	101	66.0	114
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	96.4	60.0	120
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	99.4	70.6	128
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	109	70.0	124
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	107	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	84.2	71.8	126
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	103	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	101	58.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 5500720)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	103	79.0	117
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	100	76.0	116
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	97.8	73.0	119
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	96.9	73.0	119
EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	99.5	75.0	117
EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	98.2	74.0	118
EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	99.3	75.0	117
EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	97.3	61.0	125
EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	113	67.0	123
EP074G: Trihalomethanes (QCLot: 5500720)								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	96.6	72.0	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	92.5	64.0	118
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	104	65.0	115
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	104	73.5	126
EP074H: Naphthalene (QCLot: 5500720)								
EP074: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	111	72.0	122

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: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 5497647)							
ES2343593-010	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	104	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 5497650)							
ES2343598-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	90.2	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 5505645)							
ES2343783-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	124	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	122	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	129	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	123	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	96.0	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	123	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	125	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 5505644)							
ES2343783-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	79.0	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 5504691)							
ES2343686-001	Anonymous	EK055G: Ammonia as N	7664-41-7	10 mg/L	128	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 5497648)							
ES2343593-010	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	102	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 5504690)							
ES2343686-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	109	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 5504695)							
ES2343630-018	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	98.2	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 5504694)							
ES2343630-018	Anonymous	EK067G: Total Phosphorus as P	----	1 mg/L	93.6	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 5497649)							
ES2343598-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	104	70.0	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5500720)							
ES2343594-001	Anonymous	EP074: Benzene	71-43-2	25 µg/L	93.2	70.0	130
		EP074: Toluene	108-88-3	25 µg/L	93.7	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5500720)							
ES2343594-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	25 µg/L	76.1	70.0	130
		EP074: Trichloroethene	79-01-6	25 µg/L	88.2	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP074F: Halogenated Aromatic Compounds (QCLot: 5500720)							
ES2343594-001	Anonymous	EP074: Chlorobenzene	108-90-7	25 µg/L	94.5	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2343750**	Page	: 1 of 9
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation	Date Samples Received	: 15-Dec-2023
Site	: Waterloo	Issue Date	: 22-Dec-2023
Sampler	: RF	No. of samples received	: 1
Order number	: 230515SENN	No. of samples analysed	: 1

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.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **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 : Analysis Holding Time Compliance

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
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural						
QC224	----	----	----	17-Dec-2023	15-Dec-2023	**2**
EA075: Redox Potential						
Clear Plastic Bottle - Natural						
QC224	----	----	----	18-Dec-2023	15-Dec-2023	**3**
EP025: Oxygen - Dissolved (DO)						
Clear Plastic Bottle - Natural						
QC224	----	----	----	16-Dec-2023	15-Dec-2023	**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: **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
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P)							
QC224	**15-Dec-2023**	**----**	----	----	**17-Dec-2023**	15-Dec-2023	×
EA010P: Conductivity by PC Titrator							
Clear Plastic Bottle - Natural (EA010-P)							
QC224	**15-Dec-2023**	**----**	----	----	**17-Dec-2023**	12-Jan-2024	✓
EA015: Total Dissolved Solids dried at 180 ± 5 °C							
Clear Plastic Bottle - Natural (EA015H)							
QC224	**15-Dec-2023**	**----**	----	----	**21-Dec-2023**	22-Dec-2023	✓
EA025: Total Suspended Solids dried at 104 ± 2°C							
Clear Plastic Bottle - Natural (EA025H)							
QC224	**15-Dec-2023**	**----**	----	----	**21-Dec-2023**	22-Dec-2023	✓
EA075: Redox Potential							
Clear Plastic Bottle - Natural (EA075)							
QC224	**15-Dec-2023**	**----**	----	----	**18-Dec-2023**	15-Dec-2023	×

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
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P)							
QC224	**15-Dec-2023**	**----**	----	**----**	**17-Dec-2023**	29-Dec-2023	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural (ED041G)							
QC224	**15-Dec-2023**	**----**	----	**----**	**16-Dec-2023**	12-Jan-2024	✓
ED045G: Chloride by Discrete Analyser							
Clear Plastic Bottle - Natural (ED045G)							
QC224	**15-Dec-2023**	**----**	----	**----**	**16-Dec-2023**	12-Jan-2024	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)							
QC224	**15-Dec-2023**	**----**	----	**----**	**20-Dec-2023**	12-Jan-2024	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC224	**15-Dec-2023**	**----**	----	**----**	**20-Dec-2023**	12-Jun-2024	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC224	**15-Dec-2023**	**----**	----	**----**	**21-Dec-2023**	12-Jan-2024	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
QC224	**15-Dec-2023**	**----**	----	**----**	**20-Dec-2023**	12-Jan-2024	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G)							
QC224	**15-Dec-2023**	**----**	----	**----**	**16-Dec-2023**	17-Dec-2023	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
QC224	**15-Dec-2023**	**----**	----	**----**	**20-Dec-2023**	12-Jan-2024	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
QC224	**15-Dec-2023**	**20-Dec-2023**	12-Jan-2024	✓	**20-Dec-2023**	12-Jan-2024	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
QC224	**15-Dec-2023**	**20-Dec-2023**	12-Jan-2024	✓	**20-Dec-2023**	12-Jan-2024	✓
EK071G: Reactive Phosphorus as P by discrete analyser							
Clear Plastic Bottle - Natural (EK071G)							
QC224	**15-Dec-2023**	**----**	----	**----**	**16-Dec-2023**	17-Dec-2023	✓
EP025: Oxygen - Dissolved (DO)							
Clear Plastic Bottle - Natural (EP025)							
QC224	**15-Dec-2023**	**----**	----	**----**	**16-Dec-2023**	15-Dec-2023	×

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
EP074A: Monocyclic Aromatic Hydrocarbons							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074B: Oxygenated Compounds							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074C: Sulfonated Compounds							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074D: Fumigants							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074E: Halogenated Aliphatic Compounds							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074F: Halogenated Aromatic Compounds							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074G: Trihalomethanes							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓
EP074H: Naphthalene							
Clear glass VOC vial - HCl (EP074) QC224	**15-Dec-2023**	**19-Dec-2023**	29-Dec-2023	✓	**20-Dec-2023**	29-Dec-2023	✓

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: **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)							
Alkalinity by Auto Titrator	ED037-P	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	12	**16.67**	**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
Major Cations - Dissolved	ED093F	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Redox Potential	EA075	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	10	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	9	**22.22**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	12	**16.67**	**8.33**	✓	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
Major Cations - Dissolved	ED093F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Redox Potential	EA075	3	14	**21.43**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	10	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	5	40	**12.50**	**12.50**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	40	**12.50**	**12.50**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	15	**20.00**	**15.00**	✓	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 Control Samples (LCS) - Continued							
Total Phosphorus as P By Discrete Analyser	EK067G	3	19	**15.79**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	1	12	**8.33**	**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
Major Cations - Dissolved	ED093F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	9	**11.11**	**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
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	17	**5.88**	**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 by Auto Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by Auto 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)
Suspended Solids (High Level)	EA025H	WATER	In house: Referenced to APHA 2540D. A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM Schedule B(3)
Redox Potential	EA075	WATER	In house: Ion selective electrode
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.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 liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
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.

Analytical Methods	Method	Matrix	Method Descriptions
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).
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)
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)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030F. This method is compliant with NEPM Schedule B(3)
Oxygen - Dissolved	EP025	WATER	In house: Referenced to APHA 4500-O G. Dissolved Oxygen Probe. 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)
TRH Volatiles/BTEX	EP080	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. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
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.

* Matt. Beasley
* Matthew. linz @ Senversa. com. au (GW)
* Christopher. Redford
* Bec. chapple

ALS

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Chain of Custody Documentation

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: S19142	Purchase Order:
Project Name: Waterloo Remediation	Quote No: 230515SENN
Sampled By: RF	Turn Around Time:
Project Manager: Matt Beasley	Page: 1 of 1
Email Report To: *	Phone/Mobile: 0421978848

Sample Information					Container Information		Analysis Required												Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
Lab ID	Sample ID	Matrix *	Date	Time	Type / Code	Total Bottles	B8 + Iron (dissolved)	TN, TP, RP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alk							HOLD	HT
	QC224	water	15/12/23	PM	1xP, 1xN, 1xSP, 1xVA, 4xVS	8													
Total																			

Environmental Division
Sydney
Work Order Reference
ES2343750

Telephone : +61-2-8784 8555

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:

Sampler Name: | Signature: | Date:

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature: Matt Linz	Date:	Carrier / Reference #:	Name/Signature: NCAS / [illegible]	Date: 15/12/23
Of: Senversa	Time:	Date/Time:	Of: ALS	Time: 1806
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

CERTIFICATE OF ANALYSIS

Work Order	: **ES2402591**	Page	: 1 of 8
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation	Date Samples Received	: 25-Jan-2024 12:40
Order number	: ----	Date Analysis Commenced	: 25-Jan-2024
C-O-C number	: ----	Issue Date	: 01-Feb-2024 17:46
Sampler	: ----		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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
- 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*
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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 Contract 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.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- 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.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP074: Particular samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- 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.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	23-Jan-2024 00:00	23-Jan-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2402591-001	ES2402591-002	--------	--------	--------
					Result	Result	----	----	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.04**	**6.93**	----	----	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**1210**	**179**	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**794**	**106**	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		<5	**9**	----	----	----
EA075: Redox Potential									
Redox Potential	----	0.1	mV		**100**	**114**	----	----	----
pH Redox	----	0.01	pH Unit		**6.89**	**6.81**	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**452**	**53**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**452**	**53**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**21**	**3**	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**106**	**18**	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**85**	**22**	----	----	----
Magnesium	7439-95-4	1	mg/L		**10**	**3**	----	----	----
Sodium	7440-23-5	1	mg/L		**155**	**9**	----	----	----
Potassium	7440-09-7	1	mg/L		**12**	**2**	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	23-Jan-2024 00:00	23-Jan-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2402591-001	ES2402591-002	--------	--------	--------
					Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.82**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**7.34**	**0.61**	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	**0.23**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**8.3**	**0.7**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**8.3**	**0.9**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.52**	**0.08**	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		**0.20**	<0.01	----	----	----
EN055: Ionic Balance									
ø **Total Anions**	----	0.01	meq/L		**12.4**	**1.63**	----	----	----
ø **Total Cations**	----	0.01	meq/L		**12.1**	**1.79**	----	----	----
ø **Ionic Balance**	----	0.01	%		**1.40**	----	----	----	----
EP025: Oxygen - Dissolved (DO)									
Dissolved Oxygen	----	0.1	mg/L		**4.2**	**6.4**	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	1	µg/L		**2**	<20	----	----	----
Toluene	108-88-3	2	µg/L		<2	<20	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	23-Jan-2024 00:00	23-Jan-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2402591-001	ES2402591-002	--------	--------	--------
					Result	Result	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
Ethylbenzene	100-41-4	2	µg/L		<2	<20	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<20	----	----	----
Styrene	100-42-5	5	µg/L		<5	<20	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	<20	----	----	----
Isopropylbenzene	98-82-8	5	µg/L		<5	<20	----	----	----
n-Propylbenzene	103-65-1	5	µg/L		<5	<20	----	----	----
1.3.5-Trimethylbenzene	108-67-8	5	µg/L		<5	<20	----	----	----
sec-Butylbenzene	135-98-8	5	µg/L		<5	<20	----	----	----
1.2.4-Trimethylbenzene	95-63-6	5	µg/L		<5	<20	----	----	----
tert-Butylbenzene	98-06-6	5	µg/L		<5	<20	----	----	----
p-Isopropyltoluene	99-87-6	5	µg/L		<5	<20	----	----	----
n-Butylbenzene	104-51-8	5	µg/L		<5	<20	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	50	µg/L		<50	<200	----	----	----
2-Butanone (MEK)	78-93-3	50	µg/L		<50	<200	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L		<50	<200	----	----	----
2-Hexanone (MBK)	591-78-6	50	µg/L		<50	<200	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	5	µg/L		<5	<20	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<20	----	----	----
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<20	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<20	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<20	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	<20	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	<200	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	23-Jan-2024 00:00	23-Jan-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2402591-001	ES2402591-002	--------	--------	--------
					Result	Result	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
Chloromethane	74-87-3	50	µg/L		<50	<200	----	----	----
Vinyl chloride	75-01-4	50	µg/L		<50	<200	----	----	----
Bromomethane	74-83-9	50	µg/L		<50	<200	----	----	----
Chloroethane	75-00-3	50	µg/L		<50	<200	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	<200	----	----	----
1.1-Dichloroethene	75-35-4	5	µg/L		<5	<20	----	----	----
Iodomethane	74-88-4	5	µg/L		<5	<20	----	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<20	----	----	----
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<20	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	**1770**	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<20	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<20	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<20	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<20	----	----	----
Trichloroethene	79-01-6	5	µg/L		**6**	**394**	----	----	----
Dibromomethane	74-95-3	5	µg/L		<5	<20	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<20	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<20	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		**363**	**3690**	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<20	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<20	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<20	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<20	----	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<20	----	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	<20	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<20	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<20	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC235	QC234	----	----	----
				Sampling date / time	23-Jan-2024 00:00	23-Jan-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2402591-001	ES2402591-002	--------	--------	--------
					Result	Result	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<20	----	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<20	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<20	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<20	----	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<20	----	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<20	----	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<20	----	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<20	----	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<20	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<20	----	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<20	----	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<20	----	----	----
Bromoform	75-25-2	5	µg/L		<5	<20	----	----	----
EP074H: Naphthalene									
Naphthalene	91-20-3	5	µg/L		<5	<20	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**110**	**106**	----	----	----
Toluene-D8	2037-26-5	5	%		**112**	**105**	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		**109**	**106**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

QUALITY CONTROL REPORT

Work Order	: **ES2402591**	Page	: 1 of 14
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Contact	: Sandy Phan
Address	: Level 24, 1 Market St, Sydney NSW 2000 SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation	Date Samples Received	: 25-Jan-2024
Order number	: ----	Date Analysis Commenced	: 25-Jan-2024
C-O-C number	: ----	Issue Date	: 01-Feb-2024
Sampler	: ----		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 2		
No. of samples analysed	: 2		

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*
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA005P: pH by PC Titrator (QC Lot: 5564519)									
EN2400669-012	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	8.36	8.40	0.5	0% - 20%
ES2402461-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.71	7.93	2.8	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 5564522)									
ES2402592-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1230	1230	0.2	0% - 20%
ES2402592-012	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	946	944	0.3	0% - 20%
ES2402592-023	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	3120	3120	0.0	0% - 20%
ES2402591-001	QC235	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1210	1210	0.3	0% - 20%
ES2402592-030	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	4380	4340	1.1	0% - 20%
ES2402461-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	55600	55400	0.3	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 5565822)									
EN2400669-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	1080	1050	2.7	0% - 20%
ES2402351-002	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	120	125	4.1	0% - 50%
ES2402392-002	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	408	410	0.4	0% - 20%
ES2402466-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	105	98	7.2	0% - 50%
EA025: Total Suspended Solids dried at 104 ± 2°C (QC Lot: 5565823)									
EN2400669-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	10	13	21.7	No Limit
ES2402351-002	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	<5	<5	0.0	No Limit
ES2402392-002	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	40	38	4.5	No Limit
ES2402466-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	<5	<5	0.0	No Limit
EA075: Redox Potential (QC Lot: 5563193)									

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 (%)
EA075: Redox Potential (QC Lot: 5563193) - continued									
ES2402591-001	QC235	EA075: Redox Potential	----	0.1	mV	100	94.9	5.7	0% - 20%
		EA075: pH Redox	----	0.01	pH Unit	6.89	6.92	0.4	0% - 20%
EW2400394-001	Anonymous	EA075: Redox Potential	----	0.1	mV	97.5	99.4	1.9	0% - 20%
		EA075: pH Redox	----	0.01	pH Unit	6.77	6.76	0.1	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 5564524)									
ES2402592-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	465	515	10.2	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	465	515	10.2	0% - 20%
ES2402591-001	QC235	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	452	476	5.2	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	452	476	5.2	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 5563089)									
ES2402532-009	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	319	326	2.2	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 5563088)									
ES2402532-009	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	727	733	0.9	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 5567895)									
ES2402414-007	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	6	6	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	5	5	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	11	11	0.0	0% - 50%
		ED093F: Potassium	7440-09-7	1	mg/L	1	1	0.0	No Limit
ES2402574-006	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	91	93	2.4	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	108	110	1.6	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	203	204	0.5	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	7	7	0.0	No Limit
ED093F: Dissolved Major Cations (QC Lot: 5568345)									
ES2402591-001	QC235	ED093F: Calcium	7440-70-2	1	mg/L	85	86	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	10	10	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	155	155	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	12	13	0.0	0% - 50%
ES2402738-002	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	102	100	1.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	36	36	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	6	6	0.0	No Limit
		ED093F: Potassium	7440-09-7	1	mg/L	1	1	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 5568347)									
ES2402591-001	QC235	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	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: 5568347) - continued									
ES2402591-001	QC235	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		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: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.82	0.82	0.0	0% - 50%
ES2402738-002	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: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 5568346)									
ES2402708-004	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2402710-026	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 5570584)									
ES2402537-004	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.21	0.20	0.0	0% - 20%
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 5570585)									
ES2402537-004	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 5570589)									
ES2402481-005	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 5570588)									
ES2402549-001	Anonymous	EK067G: Total Phosphorus as P	----	0.01 (0.20)*	mg/L	0.89	0.73	20.1	No Limit
ES2402481-005	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 5563083)									
ES2402363-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.01	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 5569652)									
ES2402488-001	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

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: 5569652) - continued									
ES2402488-001	Anonymous	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
ES2402488-010	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
EP074B: Oxygenated Compounds (QC Lot: 5569652)									
ES2402488-001	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
ES2402488-010	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: 5569652)									
ES2402488-001	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
ES2402488-010	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP074D: Fumigants (QC Lot: 5569652)									
ES2402488-001	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	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 (%)*
EP074D: Fumigants (QC Lot: 5569652) - continued									
ES2402488-001	Anonymous	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
ES2402488-010	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: 5569652)									
ES2402488-001	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
		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

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: 5569652) - continued									
ES2402488-010	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
		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: 5569652)									
ES2402488-001	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

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 (%)*
EP074F: Halogenated Aromatic Compounds (QC Lot: 5569652) - continued									
ES2402488-010	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: 5569652)									
ES2402488-001	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
ES2402488-010	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: 5569652)									
ES2402488-001	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2402488-010	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	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: **WATER**

				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
EA005P: pH by PC Titrator (QCLot: 5564519)								
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	101	98.8	101
				----	7 pH Unit	101	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 5564522)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	104	89.9	110
				<1	2100 µS/cm	103	90.2	111
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 5565822)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	101	87.0	109
				<10	293 mg/L	107	75.2	126
				<10	2470 mg/L	88.8	83.0	124
EA025: Total Suspended Solids dried at 104 ± 2°C (QCLot: 5565823)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	102	83.0	129
				<5	1000 mg/L	95.2	82.0	110
				<5	841 mg/L	107	83.0	118
EA075: Redox Potential (QCLot: 5563193)								
EA075: Redox Potential	----	----	mV	----	234 mV	100	96.0	106
				----	300 mV	102	97.0	105
				----	86 mV	108	97.0	115
ED037P: Alkalinity by PC Titrator (QCLot: 5564524)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	86.4	81.0	115
				----	50 mg/L	103	80.0	120
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 5563089)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	100	82.0	122
				<1	500 mg/L	98.8	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 5563088)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	98.9	80.9	127
				<1	1000 mg/L	90.2	80.9	127
ED093F: Dissolved Major Cations (QCLot: 5567895)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	108	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	101	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	97.2	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	99.3	85.0	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
ED093F: Dissolved Major Cations (QCLot: 5568345)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	102	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	96.6	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	95.4	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	102	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 5568347)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	91.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	97.8	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	95.0	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.9	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	93.1	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	87.6	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.6	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	96.6	82.0	112
EG035F: Dissolved Mercury by FIMS (QCLot: 5568346)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	95.8	83.0	105
EK055G: Ammonia as N by Discrete Analyser (QCLot: 5570584)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	109	90.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 5570585)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	104	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 5570589)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	10 mg/L	94.8	69.0	101
				<0.1	1 mg/L	102	70.0	118
				<0.1	5 mg/L	113	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 5570588)								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	4.42 mg/L	93.2	71.3	126
				<0.01	0.442 mg/L	95.7	71.3	126
				<0.01	1 mg/L	113	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 5563083)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	102	85.0	117
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5569652)								
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	93.5	77.0	119
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	93.7	69.0	129
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	94.2	76.0	118

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
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5569652) - continued								
EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	93.0	77.0	119
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	95.8	73.0	119
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	96.5	79.0	117
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	94.2	76.0	118
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	91.7	69.0	119
EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	93.4	74.0	116
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	93.2	73.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	95.2	74.0	116
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	93.1	72.0	116
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	92.3	71.0	119
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	91.2	65.0	123
EP074B: Oxygenated Compounds (QCLot: 5569652)								
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	100 µg/L	93.8	61.4	134
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	100 µg/L	77.5	73.6	130
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	100 µg/L	99.9	66.0	132
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	100 µg/L	69.2	65.0	137
EP074C: Sulfonated Compounds (QCLot: 5569652)								
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	10 µg/L	82.9	72.8	127
EP074D: Fumigants (QCLot: 5569652)								
EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	90.5	68.0	122
EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	97.0	76.0	118
EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	89.6	62.0	120
EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	89.9	60.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	99.3	69.0	117
EP074E: Halogenated Aliphatic Compounds (QCLot: 5569652)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	82.3	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	85.7	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	83.1	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	82.7	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	86.6	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	88.2	69.0	131
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	86.3	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	74.6	70.2	128

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: 5569652) - continued								
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	91.5	74.0	118
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	94.1	74.0	120
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	94.1	77.0	119
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	87.9	67.0	119
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	89.0	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	85.5	62.0	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	96.6	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	92.2	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	97.2	73.0	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	97.0	72.0	126
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	96.1	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	92.5	72.0	124
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	89.8	66.0	114
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	90.7	60.0	120
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	95.3	70.6	128
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	96.2	70.0	124
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	100	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	87.0	71.8	126
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	98.4	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	96.2	58.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 5569652)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	95.7	79.0	117
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	94.3	76.0	116
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	97.6	73.0	119
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	95.7	73.0	119
EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	95.8	75.0	117
EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	94.7	74.0	118
EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	96.4	75.0	117
EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	98.3	61.0	125
EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	106	67.0	123
EP074G: Trihalomethanes (QCLot: 5569652)								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	95.4	72.0	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	88.1	64.0	118
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	85.2	65.0	115

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
EP074G: Trihalomethanes (QCLot: 5569652) - continued								
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	86.1	73.5	126
EP074H: Naphthalene (QCLot: 5569652)								
EP074: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	105	72.0	122

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: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 5563089)							
ES2402532-009	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 5563088)							
ES2402532-009	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	84.2	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 5568347)							
ES2402708-003	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	88.1	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	92.2	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	91.4	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	87.7	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	89.8	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	85.3	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	87.4	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 5568346)							
ES2402708-002	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	75.7	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 5570584)							
ES2402537-004	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	92.8	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 5570585)							
ES2402537-004	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	101	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 5570589)							
ES2402481-006	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	112	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 5570588)							
ES2402481-006	Anonymous	EK067G: Total Phosphorus as P	----	1 mg/L	111	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 5563083)							
ES2402363-001	Anonymous						

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 5563083) - continued							
ES2402363-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	106	70.0	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 5569652)							
ES2402488-001	Anonymous	EP074: Benzene	71-43-2	25 µg/L	99.4	70.0	130
		EP074: Toluene	108-88-3	25 µg/L	98.0	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 5569652)							
ES2402488-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	25 µg/L	93.8	70.0	130
		EP074: Trichloroethene	79-01-6	25 µg/L	95.6	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 5569652)							
ES2402488-001	Anonymous	EP074: Chlorobenzene	108-90-7	25 µg/L	98.4	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2402591**	Page	: 1 of 8
Client	: **SENVERSA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MATT BEASLEY	Telephone	: +61-2-8784 8555
Project	: S19142 Waterloo Remediation	Date Samples Received	: 25-Jan-2024
Site	: ----	Issue Date	: 01-Feb-2024
Sampler	: ----	No. of samples received	: 2
Order number	: ----	No. of samples analysed	: 2

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.**
- **NO Laboratory Control outliers occur.**
- **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: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2402532--009	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

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
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural							
QC235,	QC234	----	----	----	27-Jan-2024	23-Jan-2024	**4**
EA075: Redox Potential							
Clear Plastic Bottle - Natural							
QC235,	QC234	----	----	----	25-Jan-2024	23-Jan-2024	**2**
EP025: Oxygen - Dissolved (DO)							
Clear Plastic Bottle - Natural							
QC235,	QC234	----	----	----	25-Jan-2024	23-Jan-2024	**2**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Control Samples (LCS)						
Conductivity by Auto Titrator	EA010-P	4	54	7.41	8.33	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: **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
EA005P: pH by PC Titrator								
Clear Plastic Bottle - Natural (EA005-P)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**27-Jan-2024**	23-Jan-2024	×

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								
Clear Plastic Bottle - Natural (EA010-P)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**27-Jan-2024**	20-Feb-2024	✓
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**29-Jan-2024**	30-Jan-2024	✓
EA025: Total Suspended Solids dried at 104 ± 2°C								
Clear Plastic Bottle - Natural (EA025H)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**29-Jan-2024**	30-Jan-2024	✓
EA075: Redox Potential								
Clear Plastic Bottle - Natural (EA075)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**25-Jan-2024**	23-Jan-2024	✗
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**27-Jan-2024**	06-Feb-2024	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**25-Jan-2024**	20-Feb-2024	✓
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**25-Jan-2024**	20-Feb-2024	✓
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural (ED093F)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**30-Jan-2024**	30-Jan-2024	✓
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Natural (EG020A-F)								
QC235		**23-Jan-2024**	**----**	----	**----**	**30-Jan-2024**	21-Jul-2024	✓
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Natural (EG035F)								
QC235		**23-Jan-2024**	**----**	----	**----**	**31-Jan-2024**	20-Feb-2024	✓
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK055G)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**31-Jan-2024**	20-Feb-2024	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK059G)								
QC235,	QC234	**23-Jan-2024**	**----**	----	**----**	**31-Jan-2024**	20-Feb-2024	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK061G)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	20-Feb-2024	✓	**31-Jan-2024**	20-Feb-2024	✓

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
EK067G: Total Phosphorus as P by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK067G)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	20-Feb-2024	✓	**31-Jan-2024**	20-Feb-2024	✓
EK071G: Reactive Phosphorus as P by discrete analyser								
Clear Plastic Bottle - Natural (EK071G)								
QC235,	QC234	**23-Jan-2024**	**----**	----	----	**25-Jan-2024**	25-Jan-2024	✓
EP025: Oxygen - Dissolved (DO)								
Clear Plastic Bottle - Natural (EP025)								
QC235,	QC234	**23-Jan-2024**	**----**	----	----	**25-Jan-2024**	23-Jan-2024	×
EP074A: Monocyclic Aromatic Hydrocarbons								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074B: Oxygenated Compounds								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074C: Sulfonated Compounds								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074D: Fumigants								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074E: Halogenated Aliphatic Compounds								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074F: Halogenated Aromatic Compounds								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074G: Trihalomethanes								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓
EP074H: Naphthalene								
Clear glass VOC vial - HCl (EP074)								
QC235,	QC234	**23-Jan-2024**	**31-Jan-2024**	06-Feb-2024	✓	**01-Feb-2024**	06-Feb-2024	✓

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: **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)							
Alkalinity by Auto Titrator	ED037-P	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	6	54	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	4	19	**21.05**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Redox Potential	EA075	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	16	**12.50**	**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)							
Alkalinity by Auto Titrator	ED037-P	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	7	**28.57**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	4	54	**7.41**	**8.33**	×	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	19	**10.53**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Redox Potential	EA075	3	20	**15.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	7	**28.57**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	5	40	**12.50**	**12.50**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	40	**12.50**	**12.50**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	10	**30.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	3	16	**18.75**	**15.00**	✓	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)							

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							
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	3	54	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	19	**10.53**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	16	**6.25**	**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	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	16	**6.25**	**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 by Auto Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by Auto 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)
Suspended Solids (High Level)	EA025H	WATER	In house: Referenced to APHA 2540D. A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM Schedule B(3)
Redox Potential	EA075	WATER	In house: Ion selective electrode
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.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 liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
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.

Analytical Methods	Method	Matrix	Method Descriptions
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).
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 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)
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)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030F. This method is compliant with NEPM Schedule B(3)
Oxygen - Dissolved	EP025	WATER	In house: Referenced to APHA 4500-O G. Dissolved Oxygen Probe. 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)

Preparation Methods	Method	Matrix	Method Descriptions
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)
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.

* Matt. Beasley @ Senversa. com. au
* Matthew. Linz
* Christopher. Redford
* Bec. Chapple

ALS.

senversa

Senversa Pty Ltd
www.senversa.com.au
ABN 89 132 231 380

Chain of Custody Documentation

Laboratory: mgt/Eurofins VIC
Address:
Contact: Sample Receipt
Phone:

Job Number: S19142
Project Name: Waterloo Remediation
Sampled By:
Project Manager: Matt Beasley
Email Report To: *

Purchase Order:
Quote No: 230515SENN
Turn Around Time: Standard
Page: 1 of 1
Phone/Mobile: 0421972848

Lab ID	Sample ID	Matrix *	Date	Time	Container Information: Type / Code	Total Bottles	B8 + Iron (dissolved)	TN, TP, RP, Ammonia	pH, EC, TDS, TSS	Redox, DO	Cations, Anions, Alkalinity	VOCs					HOLD	Comments: e.g. Highly contaminated sample; hazardous materials present; trace LORs etc.
1	QC235	water	23/11/24	—		8	x	x	x	x	x	x						
2	QC234	"	"	—		7		x	x	x	x	x						
Total																		

HT

Environmental Division
Sydney
Work Order Reference
ES2402591

Telephone : +61-2-8784 8555

Sampler: I attest that proper field sampling procedures in accordance with Senversa standard procedures and/or project specifications were used during the collection of these samples:	Sampler Name:	Signature:	Date: 23/11/24

Relinquished By:		Method of Shipment (if applicable):	Received by:	
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature: Ashwin	Date: 25/11
Of:	Time:	Date/Time:	Of: ALS	Time: 1240
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:
Name/Signature:	Date:	Carrier / Reference #:	Name/Signature:	Date:
Of:	Time:	Date/Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Acid (HNO_3) Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide (NaOH)/Cadmium (Cd) Preserved; S = Sodium Hydroxide Preserved Plastic; STH = Sodium thiosulfate preserved plastic; V = VOA Vial Hydochloric Acid (HCl) Preserved; VS = VOA Vial Sulphuric Preserved; VSA = Sulphuric Preserved Amber Glass; H = HCl Preserved Plastic; HS = HCl Preserved Speciation Bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; UA = Unpreserved Amber Glass; L=Lugol's iodine preserved white plastic bottle; SW= sulfuric acid preserved wide mouth glass jar

Completed by: _____
Checked by: _____

Attachment H: Additional Information

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Unit 5/43 Herbert St
Artarmon NSW 2064
email: artarmon@ghd.com.au
web: www.ghd.com.au/ghdgeotechnics
Tel: (02) 9462 4860
Fax:(02) 9462 4710

Material Test Report

Report No: SYD2301308
Issue No: 1

Client: Down To Earth
PO Box 115
Cobbitty NSW 2570

Project: 12613277 D2E

Accredited for compliance with ISO / IEC 17025 - Testing

NATA Accreditation No: 679

Approved Signatory: Jure G Vukovic

Date of Issue: 16/05/2023

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

GHD Sample No	SYD23-0242-01
Client Sample ID	BH1, 3.9-5.1m
Date Sampled	27/04/2023
Sampled By	Supplied by Client
	CLAY trace sand; grey

Test Results

Description	Method	Result	Limits
Coef of Permeability (m/s)	AS 1289.6.7.3	2 E-10	
Mean Stress Level (kPa)		30	
Permeant Used		Syd tap water	
Length (mm)		78.1	
Diameter (mm)		64.1	
Length/Diameter Ratio		1.22	
Laboratory Moisture Ratio (%)		99.5	
Laboratory Density Ratio (%)		99.0	
CompactiveEffort		Standard	
Method of Compaction		Remoulded	
Surcharge Applied (kg)		0.0	
Pressure Applied (kPa)		10	
Oversize Sieve (mm)		6.7	
Percentage Oversize (%)		0.0	
Moisture Content (%)		24.9	
Date Tested		8/05/2023	

Comments

N/A

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Our reference
PC/-9190715

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CORRS CHAMBERS WESTGARTH

Sydney
Melbourne
Brisbane
Perth
Port Moresby

[X] December 2024

By email: dmalouf@landerer.com.au
David Malouf
Landerer & Company Pty Ltd
Level 31, 133 Castlereagh Street
Sydney NSW 2000

Contact
Chiara Gay (02) 9210 6969
Email: chiara.gay@corrs.com.au

Partner
Peter Calov

Dear David

Jeffman Pty Ltd (Jeffman) and Red Breast Pty Ltd as trustee for the Eisman Family Trust (Red Breast) (together, the Vendor) sale to Waterloo Property Pty Ltd ACN 680 563 713 as trustee for Waterloo Property Unit Trust (Purchaser)

207-229 Young Street, Waterloo – Proposed Lot 1 in Plan of Proposed Subdivision of folio identifiers 1/89250, A/438772, B/438772, 4/600884 and 3/775039 (Stage 1)

Notice of Satisfaction of Remediation Condition

draft

We refer to the contract for the sale and purchase of land between the Vendor and the Purchaser in respect of the land contained in proposed lot 1 in plan of proposed subdivision of folio identifiers 1/89250, A/438772, B/438772, 4/600884 and 3/775039, now identified as folio identifier 1/1308636, exchanged on 6 September 2024 (**Stage 1 Contract**).

Unless the context otherwise requires, terms capitalised but not defined in this notice have the same meaning given in the Stage 1 Contract.

The Vendor gives the Purchaser notice pursuant to clause 38.3(b) of the Stage 1 Contract that the Remediation Condition contained in clause 38.2 of the Stage 1 Contract has been satisfied.

1 Remediation Condition – Stage 1 Remediation Works (clause 38.2(a))

The Stage 1 Remediation Works are complete.

2 Remediation Condition – Section A1 Site Audit Statements (clause 38.2(b))

Please see **attached** "Jeffman Danks Street South Precinct Stage 1 - Site Audit Report No. SAR – 2128078" prepared by Andrew Kohlrusch of GHD Pty Ltd dated 13 November 2024 (**Site Audit Report**) and the following Site Audit Statements:

(a) Section A1 Site Audit Statement for the "Main Audit Area" (clause 38.2(b)(i)(A) of the Stage 1 Contract) dated 13 November 2024; and

(b) Section A1 Site Audit Statement for the "Recreation Audit Area" (clause 38.2(b)(i)(B) of the Stage 1 Contract) dated 13 November 2024.

Andrew Kohlrusch is a NSW EPA accredited site auditor, under the *Contaminated Land Management Act 1997*, with accreditation number 0403.

3 Remediation Condition – RAP Variations Approvals (clause 38.2(c))

There have been no variations of the Remediation Action Plan. Accordingly, no RAP Variations Approvals are required.

4 Remediation Condition – 21084 S.44 Notice (clause 38.2(d))

Please see **attached** 21084 S.44 Notice.

Yours sincerely

Peter Calov
Partner

draft

Jeffman Danks Street South Precinct Stage 1 - Site Audit Report

Site Audit Report No. SAR - 2128078

GHD PTY LTD

13 November 2024

→ The Power of Commitment



Project name	Jeffman Audit				
Document title	Jeffman Danks Street South Precinct Stage 1 - Site Audit Report | Site Audit Report No. SAR - 2128078				
Project number	2128078				
File name	2128078_REP_JEFFMAN_STAGE 1_SAR.docx				
Author	Reviewer		Approved for issue		
	Name	Signature	Name	Signature	Date
S Vaughan	A Kohlrusch		A Kohlrusch		13/11/2024

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Acknowledgement of Country

GHD acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country. We pay our respects to Elders of the past, present and future, as they hold the memories, knowledges and spirit of Australia. GHD is committed to learning from Aboriginal and Torres Strait Islander peoples in the work we do.



List of Acronyms

Acronym	Definition
ACM	Asbestos containing material
AHD	Australian height datum
ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ASC	Assessment of Site Contamination
B(a)P	Benzo(a)pyrene
BGL	Below ground level
BTEX	Benzene, toluene, ethylbenzene and xylenes
CLM	Contaminated Land Management
CoC	Chain of custody
CoPC	Contaminant of potential concern
CoS	City of Sydney
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual site model
DA	Development Application
DCE	dichloroethane
DMDC	Determination for Modification of Development Consent
DNAPL	Dense non-aqueous phase liquid
DQIs	Data quality indicators
DQOs	Data quality objectives
DSI	Detailed Site Investigation
EIL	Ecologically based investigation level
EMP	Environmental management plan
EP	EnviroPacific Services Pty Ltd
EPA	Environment Protection Authority
ESL	Ecological screening level
Ha	hectares
HIL	Health-based investigation level
HHRA	Human health risk assessment
HSL	Health screening level
IAA	Interim audit advice letter
LCS	laboratory control sample
LDC	Lawrence Dry Cleaners
LNAPL	Light non-aqueous phase liquid
LOR	Limit of reporting
LTEMP	Long Term Environmental Management Plan
m	metre

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Acronym	Definition
m^2	square metres
m^3	cubic metres
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
MO	Management Order
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHRMC	National Health and Medical Research Council
NRMMC	Natural Resource Management
NSW	New South Wales
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated biphenyls
PCE	tetrachloroethene
PID	Photo-ionisation detector
PPM	parts per million
PQL	Practical quantification limits
PSI	Preliminary Site Investigation
QA	Quality assurance
QC	Quality control
RA	Remediation Area
RAP	Remedial action plan
RBSL	Risk based screening levels
RPD	Relative percentage difference
RWP	Remediation works plan
RVP	Remediation validation plan
SAQP	Sampling and analytical quality plan
SAR	Site audit report
SAS	Site audit statement
SP	Stockpile
TCE	Trichloroethene
TEQ	Toxic Equivalency Quotient
TRH	Total recoverable hydrocarbons
TSP	Treated Stockpile
USTs	Underground storage tank
VC	Vinyl chloride
VENM	Virgin excavated natural material
VHC	Volatile chlorinated hydrocarbon
VWP	Validation Work Plan
VOC	Volatile organic compound

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1. Introduction

Jeffman Pty Ltd (Jeffman) has engaged Andrew Kohlrusch ('the auditor') of GHD Pty Ltd (GHD), a New South Wales Environment Protection Authority (NSW EPA) Contaminated Land site auditor accredited under Part 4 of the *Contaminated Land Management Act 1997* (the 'Act') to conduct a site audit of the following properties:

– Lot 3 (DP775039)
– Lot 4 (DP600884)
– Lot A and B (DP438772)
– Lot 1 (DP 89250)

The noted lots are to be remediated owing to historical contamination caused by commercial/industrial land use, most notably a dry cleaning facility (Lawrence Dry Cleaners) that comprises Lot A and B (DP438772) and Lot 1 (DP 89250).

The remedial works are to be conducted in two stages, the first stage (Stage 1) comprises Part of Lot 3 (DP775039) and Part of Lot 4 (DP600884) and remedial works have been completed and validated. Stage 2 remediation will include the lots that comprise the former Lawrence Dry Cleaners.

This Site Audit Report (SAR) applies to the Stage 1 area only (herein referred to as 'Stage 1' or 'the site'). Stage 1 comprises:

– Part of Lot 3 (DP775039) and
– Part of Lot 4 (DP600884).

The Stage 1 site boundary (including lot boundaries) is presented in **Figure 1, Appendix A** (adapted from Senversa, 2024i) and within **Appendix D.**

This site audit has been conducted in accordance with the requirements of the Act as follows:

"site audit" means a review:

a. that relates to management (whether under this Act or otherwise) of the actual or possible contamination of land, and

b. that is conducted for the purpose of determining any one or more of the following matters:

i. the nature and extent of any contamination of the land,

ii. the nature and extent of any management of actual or possible contamination of the land,

iii. whether the land is suitable for any specified use or range of uses,

iv. what management remains necessary before the land is suitable for any specified use or range of uses,

v. the suitability and appropriateness of a plan of management, long-term management plan or a voluntary management proposal.

Furthermore, the Act provides the following definitions:

– *Site Audit Report - means a site audit report prepared by a site auditor in accordance with Part 4 [of the Act].*
– *Site Audit Statement - means a site audit statement prepared by a site auditor in accordance with Part 4 [of the Act].*

The Contaminated Land Management: Guidelines for the NSW Auditor Scheme (3rd edition) (NSW EPA, 2017) state that the services of a site auditor can be utilised by anyone requiring an independent review of information concerning potential or actual site contamination. Such reviews may include independent expert technical advice or 'sign-off' of contaminated site assessments, remediation, or validation work conducted by a contaminated site consultant. The Auditor Guidelines outline the site assessment and audit processes, where the contaminated land consultant is responsible for designing and conducting the site assessments. If necessary, the contaminated land consultant can also manage all remediation and validation activities to achieve specified objectives. The auditor independently reviews the consultant's work and prepares the material outcome of the site audit, i.e. the SAR and SAS.

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The auditor notes that all figures and tables presented in this SAR were extracted from the audited documentation listed in **Section 1.6.**

1.1 Regulatory guidelines

This SAR was prepared with reference to the following guidelines which have been made or approved for use by NSW EPA under s.105 of the Act at the time of the site audit and include:

– NEPC, 2013. National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended by the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), National Environment Protection Council, May 2013 (**the ASC NEPM**)
– NSW EPA (2020). Contaminated sites: Guidelines for Consultants Reporting on Contaminated sites (**the Consultant Guidelines**)
– NSW EPA (2017). Contaminated Land Management: Guidelines for the New South Wales Site Auditor Scheme (3rd edition) (**the Auditor Guidelines**)
– NSW EPA (2022). Sampling Design Guidelines (**the Sampling Guidelines**)

Other NSW regulatory endorsed documents considered as part of the site audit included:

– NSW EPA (2014). Waste Classification Guidelines Part 1: Classifying Waste (**the Waste Classification Guidelines**)
– WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (**the Asbestos Guidelines**)
– CRC Care (2015). A Practitioner's guide for the analysis, management and remediation of LNAPL. Technical Report No 34.
– NEPC (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended by the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No 1), National Environment Protection Council, May 2013 (**the NEPM**).
– ANZECC/ARMCANZ (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Paper No 4, 2000.
– NHRMC/NRMMC (2011). Australian Drinking Water Guidelines. National Health and Medical Research Council and Natural Resource Management Ministerial Council.

1.2 Site audit purpose

The purpose of this site audit is to independently review the reports listed in **Section 1.6** and state whether the site is suitable for the proposed land uses (based on the data reviewed as part of this audit).

1.3 Site audit details

Stage 1 is located off Young Street, Waterloo, Sydney, NSW, Australia. The Stage 1 boundary is presented in **Figure 1, Appendix A** and a survey plan (which includes the Stage 1 boundary is presented in **Appendix D**). For the purposes of this audit, Stage 1 has been separated into four 'audit areas', all four audit areas are referenced within this Site Audit Report (SAR), however, each audit area has an associated Site Audit Statement. The location of each audit areas is presented in **Appendix D.**

The site identification details and audit details are presented in **Table 1**.

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Table 1 Site audit details

Information	Details
Site Auditor	Andrew Kohlrusch
NSW EPA site auditor accreditation No.	0403
NSW EPA SAS No.	**Main Audit Area**: 088-2128078 **Pedestrian Link Audit Area**: 089-2128078 **Recreational Audit Area**: 090-2128078 **Substation Audit Area:** 091-2128078 The audit areas are presented in **Appendix D.**
NSW EPA SAR No.	2128078
Audit category	Statutory – further details are presented in **Section 1.5**
Legal audited area description	This SAR applies to the following lots only: – Part of Lot 3 (DP775039) – Part of Lot 4 (DP600884) The audited area is annotated as the 'Stage 1 Site Boundary' (black polygon) as presented in **Appendix D.**
Site address	– 207-229 Young Street, Waterloo, NSW (Part of Lot 3) – 881-885 Bourke Street, Waterloo, NSW (Part of Lot 4)
Local Government Authority	City of Sydney Council
Site area	**Main Audit Area**: 10,478m^2 **Pedestrian Link Audit Area**: 591m^2 **Recreational Audit Area**: 200m^2 **Substation Audit Area:** 386m^2 Total Stage 1 area: 1.17ha (approximate)
Site owner	Jeffman Pty Ltd
Previous site use	Industrial/commercial (site history is summarised in **Section 1.8**)
Current land use	At the time of issuing this SAR the site is vacant.
Proposed land use	Mixed medium-high density residential and commercial land use (including basement excavations) with a publicly accessible park area and pedestrian walkway (the 'Pedestrian Link') (further information is presented in **Section 2**).
Audit trigger	City of Sydney (CoS) Notice of Determination for Modification of Development Consent (further discussed in **Section 1.5**)

1.4 Audit background

In March 2021, the auditor issued a Section B5 Site Audit Statement (SAS) and associated Site Audit Report (SAR) (GHD 2021a and GHD 2021b respectively). The audit was required by CoS to support the original development application (DA D/2020/45). The Section B5 SAR applied to the following lots:

- Lot 3 (DP775039) (207-229 Young Street Waterloo)
- Lot 4 in DP 600884 (881-885 Bourke Street, Waterloo)
- Lot A&B in DP 438772 and Lot 1 in DP 89250 (887-893 Bourke Street, Waterloo)

The purpose of the audit was to endorse that the aforementioned lots (which include the site) had been assessed in a manner consistent with NSW EPA guidance and to comment on whether the auditor agreed that the site could be made suitable for the proposed land use (the land use at the time of the B5 SAS was subdivision of the site into

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a mixed-use development comprising high rise apartments, commercial premises and public open space). Since issue of the B5 SAS, some adjustments have been made to the proposed land use, as summarised in **Section 2**.

The SAR (GHD, 2021b) concluded that if remediation and validation was carried out as per the Remedial Action Plan (RAP) (Senversa, 2021a) and other subsequent modifications to the RAP, the site could be made suitable for the proposed land use.

1.5 Nature of this audit

This audit is statutory, as triggered by the Notice of Determination for Modification of Development Consent (the DMDC) (Application number D/2020/45/C PAN-388735) issued by City of Sydney (CoS) on 23 August 2021 (modified 07 March 2024). The DMDC states: *'On completion of the approved remediation works, a Section A1 Site Audit Statement must be obtained from a NSW Environment Protection Authority accredited Site Auditor and submitted to the Council's Area Planning Manager'.*

The DMDC also states, *'The Site Audit Statement must confirm that the site has been remediated in accordance with the approved Remedial Action Plan and that the site is suitable for its approved use'*.

1.6 Audited documentation

This SAR has been prepared following a review of the following documents:

– **Pre remediation reports**

- Senversa (2022a) Sampling and Analysis Quality Plan – Stage 1: Jeffman Danks Street South Precinct, Waterloo, NSW (REV 0, 29 April 2022) (**the SAQP**)
- Senversa (2022b) Detailed Site Investigation – Stage 1: Jeffman Waterloo Development, Waterloo, NSW (REV 1, 23 November 2022) (**the Data Gap DSI**)
- Senversa (2022c) Human Health Risk Assessment, Jeffman Waterloo Development, Waterloo NSW (REV 1, 23 November 2022) (**the HHRA**)
- Senversa (2022d) Technical Memorandum - Revision of RAP Remediation Extents in Stage 1 Area (REV 1, 24 November 2022) (**the Revision of RAP Remediation Extents**)
- Senversa (2023a) Technical Memorandum – Results of additional sampling conducted in March 2023 (REV 0, 19 May 2023) (**Post demolition additional sampling results**)
- Senversa (2023b) Remediation Works Plan – Stage 1: Jeffman Danks Street South Precinct, Waterloo, NSW (REV 2, 29 August 2023) (**the Stage 1 RWP**)
- Senversa (2023c) Validation Works Plan – Stage 1 Remediation: Jeffman Danks Street South Precinct, Waterloo, NSW (REV 2, 30 August 2023) (**the Stage 1 VWP**)
- Senversa (2024a) Change in land use remediation end point: Jeffman Danks Street, NSW (REV 0, 01 May 2024)
- Senversa (2024b) Update to risk based screening levels: Jeffman Danks Street (REV 0, 06 June 2024)
- Senversa (2024c) Validation assessment approach for the pedestrian link (REV 0, 11 June 2024)
- Senversa (2024d) Stage 1 remediation – validation update: Jeffman, Waterloo (REV 0, 12 June 2024)
- Senversa (2024e) Stage 1 validation: Modified soil vapour verification approach: Jeffman Danks Street (REV 0, 19 June 2024)
- Senversa (2024f) Stage 1 Remediation – RA1 Vapour Assessment: Jeffman, Waterloo (Revision 0, 12 July 2024)
- Senversa (2024g) Groundwater Validation: VCH Migration Control and Post-Remediation Verification - Stage 1 Remediation (REV 1, 13 September 2024)
- Senversa (2024h) Validation of soils remaining in-situ outside of RWP Remediation Areas – Stage 1 (REV 1, 19 September 2024)
- Senversa (2024i) Stage 1 Remediation Validation Report: Part Danks Street South Precinct, Waterloo, NSW (REV 1, 04 October 2024).

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– **Excavation validation reports**
  - Senversa (2024j) Excavation Surface Validation: Remediation Excavation – RA2 (Revision 1, 16 September 2024)
  - Senversa (2024k) Excavation Validation: Stage 1 remediation – part Lot 4 in DP 600884 (RA7, RA12 and Pedestrian Link) (REV 1, 13 September 2024)
  - Senversa (2024l) Excavation Surface Validation: Stage 1 remediation RA11 (Revision 2, 03 October 2024)
– **Imported materials reports**
  - Senversa (2024m) Imported material assessment: Virgin Excavated Natural Material, 2-10 Bay Street, Double Bay NSW: Lawrence Dry Cleaners Remediation Project (REV 1, 27 June, 2024)
  - Senversa (2024n) Imported material assessment: Mulch – Lawrence Dry Cleaners Remediation Project (REV 0, 08 July 2024)
  - Senversa (2024o) Imported material assessment: Virgin Excavated Natural Material, 26-42 Eden Street, Arncliffe, NSW: Lawrence Dry Cleaners Remediation Project (REV 1, 17 September, 2024)
  - Senversa (2024p) Imported material assessment: Hanson Bass Point Quarried Products: Lawrence Dry Cleaners Remediation Project (REV 1, 17 September, 2024)
  - Senversa (2024q) Imported material assessment: Virgin Excavated Natural Material, 2-10 Darling Drive, Sydney, NSW: Lawrence Dry Cleaners Remediation Project (REV 1, 17 September, 2024)
– **Off-site disposal reports**
  - Senversa (2024r) Waste Classification Letter: Stockpile Assessment SP001 (REV 1, 03 September, 2024)
  - Senversa (2024s) Waste Classification Letter: Stockpile Assessment SP002 (REV 1, 03 September, 2024)
  - Senversa (2024t) Waste Classification Letter: Stockpile Assessment SP004 (REV 1, 03 September, 2024)
  - Senversa (2024u) Waste Classification Letter: Stockpile Assessment SP010 and SP021 (REV 2, 03 September, 2024)
  - Senversa (2024v) Waste Classification Letter: Stockpile Assessment SP006 (REV 2, 02 October, 2024)
  - Senversa (2024w) Waste Classification Letter: Stockpile Assessment SP007 (REV 2, 02 October, 2024)
  - Senversa (2024x) Waste Classification Letter: Stockpile Assessment SP017 (REV 2, 03 September, 2024)
  - Senversa (2024y) Waste Classification Letter: Stockpile Assessment SP018 (REV 2, 02 October, 2024)
  - Senversa (2024z) Waste Classification Letter: Stockpile Assessment SP032 (REV 1, 03 September, 2024)
  - Senversa (2024aa) Waste Classification Letter: Stockpile Assessment SP033 (REV 1, 03 September, 2024)
  - Senversa (2024ab) Waste Classification Letter: Stockpile Assessment SP035 (REV 1, 03 September, 2024)
  - Senversa (2024ac) Waste Classification Letter: Stockpile Assessment SP038 (REV 1, 03 September, 2024)
  - Senversa (2024ad) Waste Classification Letter: Stockpile Assessment SP040 (REV 2, 02 October, 2024)
  - Senversa (2024ae) Waste Classification Letter: Stockpile Assessment SP043 (REV 2, 02 October, 2024)
  - Senversa (2024af) Waste Classification Letter: Stockpile Assessment SP039, SP060 and SP061 (REV 1, 03 September, 2024)
  - Senversa (2024ag) Waste Classification Letter: Stockpile Assessment SP047 (REV 2, 02 October, 2024)
  - Senversa (2024ah) Waste Classification Letter: Stockpile Assessment SP048 (REV 2, 02 October, 2024)
  - Senversa (2024ai) Waste Classification Letter: Stockpile Assessment SP051 (REV 1, 03 September, 2024)

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- Senversa (2024aj) Waste Classification Letter: Stockpile Assessment SP054 (REV 1, 03 September, 2024)
- Senversa (2024ak) Waste Classification Letter: Stockpile Assessment SP055 (REV 1, 03 September, 2024)
- Senversa (2024al) Waste Classification Letter: Stockpile Assessment SP052, SP060 and SP061 (REV 1, 03 September, 2024)
- Senversa (2024am) Waste Classification Letter: Stockpile Assessment SP056 (REV 2, 02 October, 2024)
- Senversa (2024an) Waste Classification Letter: Stockpile Assessment SP057 (REV 1, 03 September, 2024)
- Senversa (2024ao) Waste Classification Letter: Stockpile Assessment SP062, SP060 and SP061 (REV 1, 03 September, 2024)
- Senversa (2024ap) Waste Classification Letter: Stockpile Assessment SP068 (REV 1, 03 October 2024)
- Senversa (2024aq) Stage 1 Remediation – RA2 Vapour Verification Assessment: Jeffman, Waterloo (REV 1, 16 September, 2024)

– **Treated stockpile reports**

- Senversa (2024ar) Stockpile Assessment: Stockpile TSP004 (REV 1, 02 September, 2024)
- Senversa (2024as) Stockpile Assessment: Stockpile TSP005 (REV 1, 02 September, 2024)
- Senversa (2024at) Stockpile Assessment: Stockpile TSP006 (REV 1, 02 September, 2024)
- Senversa (2024au) Stockpile Assessment: Stockpile TSP007 (REV 1, 02 September, 2024)
- Senversa (2024av) Stockpile Assessment: Stockpile TSP008 (REV 1, 02 September, 2024)
- Senversa (2024aw) Stockpile Assessment: Stockpile TSP009 (REV 1, 02 September, 2024)
- Senversa (2024ax) Stockpile Assessment: Stockpile TSP010 (REV 1, 02 September, 2024)
- Senversa (2024ay) Stockpile Assessment: Stockpile TSP011 (REV 1, 02 September, 2024)
- Senversa (2024az) Stockpile Assessment: Stockpile TSP012 (REV 1, 02 September, 2024)
- Senversa (2024ba) Stockpile Assessment: Stockpile TSP013 (REV 1, 02 September, 2024)
- Senversa (2024bb) Stockpile Assessment: Stockpile TSP014 (REV 1, 02 September, 2024)
- Senversa (2024bc) Stockpile Assessment: Stockpile TSP015 (REV 1, 02 September, 2024)
- Senversa (2024bd) Stockpile Assessment: Stockpile TSP016 (REV 1, 02 September, 2024)
- Senversa (2024be) Stockpile Assessment: Stockpile TSP044 (REV 1, 02 September, 2024)

– **Un-treated stockpile reports**

- Senversa (2024bf) Stockpile Assessment: Stockpile SP013 (REV 1, 16 August, 2024)
- Senversa (2024bg) Stockpile Assessment: Stockpile SP024 (REV 1, 16 August, 2024)
- Senversa (2024bh) Stockpile Assessment: Stockpile SP025 (REV 1, 16 August, 2024)
- Senversa (2024bi) Stockpile Assessment: Stockpile SP028 (REV 1, 16 August, 2024)
- Senversa (2024bj) Stockpile Assessment: Stockpile SP034 (REV 1, 16 August, 2024)
- Senversa (2024bk) Stockpile Assessment: Stockpile SP041 (REV 1, 16 August, 2024)
- Senversa (2024bl) Stockpile Assessment: Stockpile SP045 (REV 1, 16 August, 2024)
- Senversa (2024bm) Stockpile Assessment: Stockpile SP059 (REV 1, 16 August, 2024)
- Senversa (2024bn) Stockpile Assessment: Stockpile SP036 (REV 1, 16 August, 2024)

– **Management Plans**

- Senversa (2024bo) Pedestrian Link – Long-Term Environmental Management Plan (Asbestos Management Plan): Part Danks Street South Precinct, Waterloo, NSW (REV 1, 20 September, 2024)

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Each report was reviewed by the auditor and review comments were provided to Senversa within interim audit advice letters (IAA) or tracked in audit commentary spreadsheets. Copies of IAAs/audit spreadsheets are presented in **Appendix B.**

1.7 Background reports

The auditor also considered the following documents as background information:

- Senversa (2019a) Preliminary Site Investigation: Jeffman Danks Street South Precinct (REV 0, 04 March 2019)
- *Senversa (2019b)* Overarching Remediation Action Plan (REV 1, 11 December 2019)
- Senversa (2021a) Remediation Action Plan: Jeffman Danks Street South Precinct, Waterloo, NSW (REV 2, 24 February 2021)
- (Senversa 2021b) Detailed Site Investigation, Jeffman Danks Street South Precinct, Waterloo, NSW. 26 February 2021 (REV 3, 26 February 2021)
- GHD (2021a) Site Audit Report: Danks Street South Precinct, Waterloo, NSW (March, 2021)
- GHD (2021b) Site Audit Statement: 207-229 Young Street, Waterloo and 881-885 Bourke Street, Waterloo and 887-893 Bourke Street, Waterloo (05 March 2021).

1.8 Site background

A summary of site history information is presented in **Section 4**. A summary of the more recent site background information is presented below:

- Stage 1 and Stage 2 have been investigated since 2003. The investigations focused primarily on the presence of volatile chlorinated hydrocarbon (VCH) contamination associated with the Lawrence Dry Cleaners (LDC) facility (located in Stage 2). Initial investigations were completed in the early and mid-2000s, with progressive assessment and works to support remediation planning/design of Significant Contaminants (as defined in the NSW EPA Management Order issued on 26 May 2011) identified within the site and adjacent land up until 2011/2012.
- On 31 October 2003 the EPA issued a 'Declaration of Investigation Area' applying to Lot A and Lot B (DP438722)
- On 4 May 2004, the EPA issued a voluntary investigation proposal for the site
- On 2 November 2005, the EPA issued a 'Declaration of Remediation Site' declaring that a portion of the site was a 'remediation site' under the Act (1997) and declared portions of the site to be 'Significantly Contaminated Land' (declaration No. 21084 under section 11 of the *Contaminated Land Management ACT, 1997* (the Act)).
- The portion of the site that was declared to be 'significantly contaminated' was made the subject of an NSW EPA Management Order (MO) (issued 26 May 2011).
    - The MO stated that the 'Significant contaminants' were defined as chlorinated hydrocarbons, including tetrachloroethene (PCE), trichloroethene (TCE), dichloroethane (DCE), and vinyl chloride (VC). The MO states that the NSW EPA believes that the land and groundwater is contaminated and that the contamination is significant enough to warrant regulation. The MO stated that Jeffman Pty Ltd and Lawrence Dry Cleaners Pty Ltd must carry out various investigations and monitoring of various media, conduct remediation actions including preparation, approval and implementation of a remediation action plan (prepared by AECOM in 2011) and provide remediation information to the public and to affected landholders (the MO is further discussed in **Section 1.8.2**).
    - 'Clean-up' of the groundwater plume (as per requirements of the MO) was reportedly achieved before May 2016. This was achieved via implementation of a groundwater extraction and treatment system and Enhanced in-situ bioremediation (EISB).
    - Stage 1 was removed from the MO on 27 June 2024 (further discussed in **Section 1.8**).
- Senversa was engaged as the validation consultant from circa 2019. During this time, Senversa has conducted various stages of intrusive site investigations including PSI, DSI, data gap DSI, human health and

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ecological risk assessment. Senversa calculated risk based screening levels (RBSLs) for significant contaminants at the site and prepared a remediation works plan (RWP) and remediation validation plan (RVP).

– The auditor has been involved in the review and endorsement of the Senversa reports and commentary has been periodically presented within various Interim Audit Advice (IAA) letters.
– In March 2021, the auditor prepared a Site Audit Report (SAR) (GHD, 2021a) which included a review and endorsement of the Senversa DSI and the RAP.
– Jeffman appointed EnviroPacific (EP) as the principal contractor to remediate Stage 1 (as per the Senversa RAP, reviewed as part of the GHD SAR). EP is responsible for all remedial works including recording and maintaining accurate and complete documentation to demonstrate successful implementation of the remediation works.
– Stage 1 remediation has been finalised, and this SAR includes the auditor's review of the remediation validation documentation provided by Senversa.

1.8.1 Significantly contaminated land

On 02 November 2005, the NSW EPA declared a portion of the site to be 'Significantly Contaminated' by declaration no. 21084 under Section 11 of the Act.

The significantly contaminated land declaration applies to:

– Lots A and B in DP438772 & Lot 1 in DP89250
– Lot 1 in DP88482
– Lot B in DP88095
– Parts of Lot 3 in DP775039
– Parts of Lot 2 in DP800705

Lot boundaries are presented on **Figure 1, Appendix A** (adapted from Senversa, 2024i).

1.8.2 Management Order

On 26 May 2011, the majority of Stage 1 and Stage 2 (and a portion of the Dahua site to the south) was declared to be Significantly Contaminated Land previously subject to a Management Order (MO) (no. 2011403) (issued by the Land and Environment Court (LEC) under *the Contaminated Land Management Act (1997))*. Stage 1 was removed from the MO on 27 June 2024 – further discussion below.

The MO stated that the 'Significant contaminants' were chlorinated hydrocarbons, including tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE), and vinyl chloride (VC). The MO states that the NSW EPA believes that the land is contaminated and that the contamination is significant enough to warrant regulation for the following reasons:

– Groundwater beneath the site is known to be contaminated with the Significant Contaminants (listed above) in excess of adopted assessment criteria
– The groundwater has migrated downgradient of the source and has impacted on adjoining sites and may continue to spread which may put potential future users of groundwater at risk.

The MO stated that Jeffman Pty Ltd and Lawrence Dry Cleaners Pty Ltd must carry out various investigations and monitoring of various media, conduct remediation actions including preparation, approval and implementation of a remediation action plan and provide remediation information to the public and to affected landholders.

Amendments to the Management Order requested by Senversa, on behalf of Jeffman, were subsequently approved by the EPA by the issue of s44 notices on 28 August 2014, 27 February 2015, 9 February 2016, 7 July 2017,1 March 2021 and 24 May 2024. The most recent update to the management order included the removal of Stage 1 from the MO, the updated MO boundary is presented in **Figure 1** below.

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Figure 1 Updated management order boundary (as of 1 August 2024)



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1.9 Permitted land uses

The Sydney Local Environment Plan (2012) defines the Stage 1 land zoning as follows:

Part of Lot 3 (DP775039) - E1 (Local Centre) (Sydney Local Environment Plan 2012)

- Permitted without consent
  - Nil

– Permitted with consent
  - Amusement centres; Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Light industries; Local distribution premises; Medical centres; Oyster aquaculture; Places of public worship; Public administration buildings; Recreation facilities (indoor); Respite day care centres; Service stations; Shop top housing; Tank-based aquaculture; Veterinary hospitals; Any other development not specified above.

– Prohibited
  - Depots; Extractive industries; Freight transport facilities; Heavy industrial storage establishments; Industrial retail outlets; Industries; Pond-based aquaculture; Storage premises; Transport depots

Part of Lot 4 (DP600884) - MU1 (Mixed Use) (Sydney Local Environment Plan 2012)

– Permitted without consent
  - Home occupations

– Permitted with consent
  - Amusement centres; Boarding houses; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Information and education facilities; Light industries; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Vehicle repair stations; Any other development not specified above.

– Prohibited
  - Extractive industries; Heavy industrial storage establishments; Heavy industries; Pond-based aquaculture

The Stage 1 boundary and lot boundaries are presented on **Figure 1, Appendix A** (adapted from Senversa, 2024i).

1.10 Development application

A Development Application (DA D/2020/45) was submitted to City of Sydney (CoS) on 21 January 2020. The DA set out the subdivision and concept design of the site. Development approval was granted on 23 August 2021. A Section B5 SAS (GHD, 2021a) – stating that the remedial action plan prepared by Senversa (26 February 2021) could render the site suitable for the proposed land uses – was submitted to support the DA.

Since the development approval was issued by CoS, several modifications have been made to the development consent, the most recent modification captured within a *'Notice of determination for modification of development consent' (City of Sydney) (Date of modification: 07 March, 2024).* Part of the updated notice includes additional requirements regarding the engagement of a NSW EPA accredited site auditor, including a requirement to issue a Section A SAS, further information is presented in **Section 1.10.1.**

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1.10.1 Notice of determination for modification of development consent

Part B of the notice of determination for modification of development consent (applicable to Stage 1 and Stage 2) states various conditions of consent, a summary of relevant conditions (applicable to the audit process) is presented below:

- **Section 16**
  - The site is to be remediated and validated in accordance with the Remedial Action Plan prepared by Senversa, dated 26 February 2021, reference number S17025_028_rpt rev2 rap and Section B Site Audit Statement, Andrew Kohlrusch of GHD Environmental, dated 5 March 2021
  - The site is to be remediated so that the land is not subject to any onerous long term EMPs that require monitoring and reporting by future landowners.
- **Section 24**
  - On completion of the approved remediation works, a Section A1 Site Audit Statement must be obtained from an NSW Environment Protection Authority accredited Site Auditor and submitted to the Council's Area Planning Manager
  - The Site Audit Statement must confirm that the site has been remediated in accordance with the approved Remedial Action Plan and that the site is suitable for its approved use.
    - (a) In circumstances where the Site Audit Statement is subject to conditions that require ongoing review by the Auditor or Council, these must be reviewed and must be approved by the Council's Health and Building Unit in writing through the Area Planning Manager before the Site Audit Statement is issued.
    - (b) In circumstances where the Site Audit Statement conditions (if applicable) are not consistent with the consent, the development must not proceed until the inconsistency has been resolved to the satisfaction of Council (such as via a S4.55 modification of the consent pursuant to the provisions of the Environmental Planning & Assessment Act 1979).
    - (c) No Certificate of Completion for Public Domain Works or any Occupation Certificate for buildings constructed within the approved development parcels (whichever is sought first) can be issued unless a Section A1 Site Audit Statement has been submitted to and approved by Council in accordance with this condition.
    - (d) Should the site require further remediation and the issue of an A1 Site Audit Statement is not possible following completion of the approved remediation strategy, a Section A2 statement and Site Audit Report from a NSW EPA accredited Site Auditor must be provided to the Area Planning Manager to fully explain the contamination status of the land, reasons why the site could not be fully remediated and what measures will be required to make the land suitable for its use.

1.11 Site inspections

The auditor, Andrew Kohlrusch, and/or the auditor assistant(s), Jessica Hannaford and/or Sam Vaughan, conducted several site visits during the remediation as follows:

- 23 October 2023
- 22 March 2024
- 15 February 2024
- 17 May 2024
- 3 September 2024

The site visits coincided with key milestones (such as completion of the removal contaminated soil at the nominated remediation areas, an inspection of the floor of the excavation of RA2, discussions with Senversa on the scope of work necessary around the sub-station and the tree protection zone and a final visit after all remedial and characterisation works had been completed).

Site visit records (including site photographs) are presented in **Appendix C.**

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1.12 Site audit report structure

This SAR documents the audit of the reports referenced in **Section 1.6**. Where the auditor has provided comments on the work, these are highlighted in orange shaded dialogue boxes. The remainder of this report is organised as follows:

Section 2	Proposed Development
Section 3	Site Conditions and Environmental Setting
Section 4	Historical Land Use
Section 5	Remedial Action Plan
Section 6	Pre-remediation Conceptual Site Model
Section 7	Stage 1 Characterisation Reports
Section 8	Remediation and Validation Plans
Section 9	Stockpile and Materials Management
Section 10	Validation Reports
Section 11	Post Remediation Conceptual Site Model
Section 12	Long Term Environmental Management Plan
Section 13	Evaluation of Quality Assurance and Quality Control
Section 14	Other Considerations
Section 15	Audit Conclusions
Section 16	Disclaimer

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2. Proposed development

The *'Notice of determination for modification of development consent' (City of Sydney) (Date of modification: 07 March, 2024)* describes the proposed development as '*Concept building envelopes for three mixed-use (commercial and residential) buildings and one residential apartment building and vehicle access locations. The approval also includes a first stage of works including demolition, remediation and subdivision to create four new development parcels and transfer lands, and embellishment works'.*

During Stage 1 remediation works, Jeffman instructed Senversa and EnviroPacific to conduct remediation to make all of Stage 1 suitable for mixed medium-high density residential and commercial land use (including basement excavations), noting the following exceptions:

– the Pedestrian Link Audit Area and the Substation Audit Area (commercial industrial land use)
– the publicly accessible park (public open space land use)

The proposed locations of these items are considered to be fixed and are presented in **Appendix D** (adapted from Senversa, 2024i).

The specific locations of the proposed residential/commercial premises are presently unknown and will be determined by future site owners.

Under an integrated concept Development Application (DA) D/2020/45, Jeffman intends to eventually transfer ownership of the Pedestrian Link and Public Park to City of Sydney Council. A stormwater pipe main and a swale drain is proposed to eventually be constructed beneath the paved surface of the pedestrian link.

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3. Site conditions and environmental setting

A summary of the site conditions provided by Senversa in the background reports listed in **Section 1.6 and Section 1.7** are summarised in **Table 2.**

Table 2 Site conditions and environmental setting

Information	
Site description prior to remediation	Prior to demolition of on-site structures in early 2023, Stage 1 included: **Part Lot 3** – Several commercial style warehouse structures comprising offices, café, storage and distribution warehouse and food and beverage equipment maintenance and a surfaced car park **Part Lot 4** – A commercial warehouse comprising furniture retail and storage business (Glicks Furniture) and a surfaced car and access driveway. Additional site history information is presented in **Section 4.**
Site geology	The Senversa DSI (2021b) indicates that the site lithology comprises Triassic Hawkesbury Sandstone at depth, overlain by residual clay from weathering of Triassic Wianamatta Shale and then Quaternary unconsolidated sediment (predominantly aeolian [wind blown] origin). The sands (inferred to be Botany Sands group) have been encountered by Senversa across the site at depths ranging between 4.0m bgl and 9.1m bg. Senversa (2024i) has also reported the presence of minor and discontinuous organic-rich silt and peaty interbeds within the sandy layer in some areas. Fill has generally been encountered overlying the aeolian sands. Previous investigations have identified that the site fill can contain ash, slag, brick, tiles, concrete rubble, fibrous cement sheeting, glass, coal and sandstone and shale rubble. Senversa (2022b) report that fill depths have generally been observed within the order of one to three metres.
Topography and drainage	Senversa (2021b) reported that surface water features in the vicinity of the site include ponds in Centennial Park (around 1-1.5 kilometres to the east) and Sheas Creek stormwater channel (which drains to Alexandra Canal around two kilometres to the south). There are no surface water bodies on the site. Senversa (2021b) reported that water in Sheas Creek stormwater channel flows to the south towards Alexandra Canal. The former Sydney Water property to the immediate south of Stage 1 is lower lying than Stage 1. Surface water flow at the properties is captured by stormwater drains in Bourke Street, Danks Street and Young Street which are likely to discharge to Sheas Creek stormwater channel. A survey plan (drafted 05 July 2024) presented within Senversa (2024i) indicates that the site is generally situated at an approximate elevation of 29 to 30m AHD. The eastern portion of Stage 1 appears to be generally slightly elevated above the remaining portions of Stage 1 with a slight downward slope towards the west and south-west. Senversa (2024i) reported that the final Stage 1 survey indicated the Stage 1 site surface was generally 0.5m lower than the pre-remediation site surface.
Hydrogeology	The site is located within the unconfined Botany Sands Aquifer. Groundwater beneath the site is generally encountered at a depth of two to four metres below ground level (but has also been encountered at shallower depths) and is found in both fill and the within the Botany Sands. Senversa (2022b) report that groundwater flow direction generally mirrors that of the wider area i.e. to the southwest, although a suspected mounding effect within the Stage 2 area may be causing a proportion of flow towards the south-west and possibly to the north. A residual clay layer between Botany Sands and the shale/sandstone is inferred to act as an aquitard. Groundwater flow in the shale/sandstone is reportedly more westerly than in the sands. Senversa (2022b) reported that the hydraulic gradient is 0.02 to 0.05 in the sands and 0.02 to 0.03 in the sandstone. Hydraulic conductivity measurements in the sand range from 0.1 to 5 m/day while the sandstone is regarded as relatively impermeable.

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Information	
	Senversa (2024g) noted that the post remediation groundwater data set (including data collected during August 2024) indicates that regional flow patterns around the site within the Botany Sands Aquifer remain broadly similar to pre-remediation flow patterns, i.e. a slight groundwater mound is centred approximately over the central portion of the LDC (located within Stage 2) with flow directions inferred to be to the west, south and east from the 'high point' beneath the former Lawrence Dry Cleaners (LDC) (located within the western portion of stage 2). Senversa (2024g) also note that groundwater level data loggers appear to show an increased rainfall recharge response within areas of the site where pavement/concrete slabs have been removed as part of remediation works. Senversa also report that the presence of the sheet pile wall within the eastern portion of Stage 1 is limiting groundwater flow within the Botany Sands Aquifer from migrating from Stage 2 to Stage 1. Senversa (2024g) reported a broad general increase in groundwater levels in the order of 1m at the site between August 2023 and June 2024 at all monitoring locations across Stage 1 and Stage 2, Senversa indicate this rise is beyond expected historical groundwater level fluctuations and is likely occurring regionally due to above average rainfall levels at the time and is likely partially affected by removal of hardstand at the site, Senversa note that local groundwater levels will likely revert following development at the site.
Surrounding land use	**North:** Mixed commercial/residential buildings along Danks Street comprising retail and café/restaurants at ground level, overlying medium to high density residential apartments with basement car parking at some buildings **South:** Multistorey residential construction in progress immediately off-site to the south-east at the time of issuing this SAR. Immediately south of site is largely vacant, grassed property which includes Sydney Water Corporation buildings and associated infrastructure e.g. water pumping station, pressure tunnel valve house, chlorinating unit and a substation. **East:** Bourke Street, including various commercial properties including car dealership, café, gym, beauty salon, restaurant etc and high density residential dwellings. **West:** Young Street including commercial premises, church, café with residential dwellings beyond.
Receptors	Senversa (2022b) references the following site receptors: – Future residents – Commercial workers – Park users – Road users – Intrusive maintenance workers – Terrestrial ecology of the future park – Construction workers during future development Groundwater receptors are generally not considered because the site is located within zone 2 of the designated temporary water restriction (Botany Sands Groundwater Source). In this zone, all domestic bore water use is banned. Furthermore, Senversa reported that a search of groundwater bores showed that around 95 groundwater bores were registered within 500m of the site, however, the majority were registered as 'monitoring bores' and four were registered as 'manufacturing and industry'. Two bores characterised as 'recreation' are reportedly located 370m east and 470m north-west (and upgradient) of the site. The pre-remediation conceptual site model (CSM) is further discussed in **Section 0**. A post remediation CSM is presented in **Section 11.**

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3.1 Auditor discussion – site conditions and environmental setting

The auditor recognised that a substantial number of investigations have been conducted at the site, resulting in a comprehensive understanding of the local environment setting and influences on contaminant migration. Environmental setting information has been discussed in detail within the various reports listed in **Section 1.6 and Section 1.7**.

The site description as well as the immediate surrounding land uses reported in the reviewed reports were generally consistent with the auditor's observations made during the various site visits.

The auditor considered that the information provided by Senversa within the reviewed documentation presents a comprehensive appreciation of the Stage 1 site conditions and environmental setting.

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4. Historical land use

Senversa (2022b) report that the site and surrounding land have been utilised for various industrial activities for over 60 years including e.g. electrical, metal fabrication, printing, kerosene lamp manufacture, furniture, appliance repair, furniture manufacturing, vehicle maintenance/depots. The Lawrence Dry Cleaners facility (previously located immediately off-site to the east within Stage 2) reportedly commenced commercial dry cleaning operations circa 1973.

The site had been contaminated by chemicals associated with historical dry cleaning activities (historically located within Stage 2), filling and other industrial activities. Stage 1 and Stage 2 have been the subject of various contamination investigations and remedial activities since the early 2000s (further discussed in **Section 1.8**).

A summary of historical, potentially contaminating activities which may have impacted the site are presented within Table 3 (adapted from Senversa, 2022b). Senversa (2022b) also reported that the information presented in Table 3 was compiled from a combination of desktop review, interviews and reviews of historical aerial photography.

Table 3 Site history summary (adapted from Senversa, 2022b)

Location	Historical potentially contaminating activities
On-site	
Lot 4 (DP600884) (the western portion of this site is within he site boundary for the purposes of this SAR).	**Historical Activities:** Motor body fabrication with associated workshop and storehouses; kerosene lamp manufacturing/distributing (southern portion); machinery manufacturing and motor body building (northern portion, adjacent Danks Street) and possible bus depot. **Chemicals of concern:** VHCs; TPH and BTEX (from fuels, oils, lubricants); PAH (from fuels, oils, coke and ash in fill); ACM; metals; less likely CoPC include pesticides, phenolic compounds, PCBs.
Lot 3 (DP775039)	**Historical activities:** Truck depot with maintenance workshop and storehouses; plumbing supply store; plumbing supplies; equipment repair for the food and beverage industry and possible (confirmed) transformer yard. **Chemicals of concern:** VHCs; TPH and BTEX (from fuels, soils, lubricants); PAH (from fuels, oils, coke and ash in fill); ACM; metals; less likely CoPC include pesticides, phenolic compounds, PCBs.
Off-site	
Lawrence Dry Cleaners (LDC) (located immediately off-site to the east – within Stage 2)	**Historical activities/source:** Electrical engineering and condenser manufacture; printing and manufacturing of carbon paper and stationery; storage and manufacture of wire, nuts and bolts; compressor manufacturing; dry-cleaning facility and; in-filling. **Chemicals of concern:** volatile halogenated compounds (VHCs) (principally tetrachloroethene, trichloroethene, 1,2-dichloroethene, vinyl chloride); total petroleum hydrocarbons (TPH) including benzene, toluene, ethyl benzene and xylenes (BTEX) (from white spirits, maintenance oils); polycyclic aromatic hydrocarbons (PAH) (from oils, coke and ash in fill); asbestos containing materials (ACM); acids/alkalis/detergents (from laundry use); nutrients, methane and metals; less likely contaminants of potential concern (CoPC) include pesticides, phenolic compounds, polychlorinated biphenyls (PCBs).
Dahua and City West Sites (located immediately off-site to the south-east)	The Dahua and/or CityWest sites have previously been used for a range of industrial and water infrastructure/supply uses, with possible contaminants being VHCs; TPH, BTEX and PAH; ACM; metals and PCBs. Activities are known to have included manufacturing of glass jars; motor vehicle repairs; printing works; furniture manufacturing; electrical appliances & equipment have also been historically conducted in land surrounding the site. Further from the site, potentially contaminating land uses include fuel service stations, dry cleaners and iron and steel foundries.

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4.1 Auditor discussion – historical land use

The auditor notes that Senversa presented a detailed appreciation of the site's history within the various documents reviewed as part of this audit (i.e. the reports listed in **Section 1.6**) and within the background reports listed in **Section 1.7**. The identification of the activities and/or areas of concern allowed appropriate selection of chemicals of concern for the subsequent sampling programs.

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5. Remedial Action Plan

The objectives of the RAP (Senversa, 2021a) was to set the remediation goals, outline the remediation steps to achieve the goals and identify requirements to complete the remediation in an environmentally acceptable manner. The RAP scope of works included:

– Summarising the pre-remediation understanding of the nature and extent of contamination
– Summarising the pre-remediation conceptual site model (CSM)
– Identifying remediation objectives and drivers, assessing remedial options
– Developing a framework of remediation tasks required to implement the remedial approach documenting validation requirements
– Listing requirements for future site development and long term management of residual contamination
– Describing how potential risks to human health and the environment could be mitigate during remediation and how unexpected finds would be managed.

The RAP (Senversa, 2021a) presents clean up criteria for chemicals of concern including the following;

– Soil - VCH (PCE, TCE, DCE; VC), TPH, BTEX, PAHs, PCBs, metals (arsenic, cadmium, iron, chromium, copper, lead, mercury, nickel and zinc), ACM, pesticides and phenolic compounds;
– Groundwater - VCH (PCE, TCE, DCE and VC), TPH, BTEX, PAH, PCBs, acids, alkalis, ammonia, phosphate, methane, metals (arsenic, cadmium, iron, chromium, copper, lead, mercury, nickel and zinc), pesticides, phenolic compounds; and
– Soil vapour and ground gas – VCH (PCE, TCE, DCE and VC), BTEX, TRH, naphthalene and methane.

To assess the efficacy of the remedial works in achieving end points for the land use proposed as part of the subdivision plan, the RAP documented that the remedial work would be validated with reference to assessment criteria, as follows:

– Tier 1 Screening Criteria: Generic assessment criteria presented in ASC NEPM (or by other international regulatory bodies if not available) for the proposed land uses;
– Interim HSLs: Site-specific criteria for Significant Contaminants with consideration of the vapour inhalation and other exposure pathways specific to the proposed future land uses
– Aesthetic and Acute Risk Considerations: Criteria relevant to LNAPL formation, explosive risks, impacts on subsurface infrastructure and visual and olfactory considerations.

The RAP documents that consideration will also be given during the remedial works to aesthetic issues in accessible soils or soils to be used as growing media, including the following:

– No highly malodourous soils.
– No heavy staining or discolouration in soils.
– No large or frequently occurring anthropogenic materials present.
– LNAPL or DNAPL which could impact the integrity of subsurface structures, should be absent.

The RAP (Senversa, 2021a) stated that the remedial strategy would include:

– Remediation of the most significant contamination by VCHs at the source site (located in Stage 2) and low-level VCHs and other potential contaminants in fill material in other areas to make the site suitable for the proposed development.
– Remediation of public domain land to be dedicated to City of Sydney (i.e. roadways, pedestrian link and open space park) such that the land is made suitable with no ongoing management of contamination required.

The RAP (Senversa, 2021a) discussed the Stage 1 and Stage 2 sites in terms of development ‘parcels’ (including Parcel 1 to Parcel 4). Stage 1 comprises Parcel 1 and Parcel 4. The locations of these Parcels are presented on **Figure 2, Appendix A** (adapted from Senversa, 2024i).

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6. Pre-remediation conceptual site model

The Validation Work Plan (VWP) (Senversa, 2023c) presented a summary of key complete source-pathway-receptor linkages following completion of the data gap investigation (Senversa, 2022b), conducted subsequent to completion of the RAP that had been reviewed as part of the Section B5 SAS. This 'pre-remediation CSM' is summarised within **Table 4**.

Table 4 Summary of pre-remediation CSM (summarised from the Stage 1 RVP (Senversa, 2023c))

Stage 1 Area	Pathway	Receptor
Mixed residential/commercial parcels	Inhalation of VHCs via: – vapour intrusion into future basements – Shallow ground water seepage into future basements – Leaching from soil to groundwater and then seepage into future basements	Future/existing residents Commercial workers
	– Inhalation from VCH soil vapour within a trench – Direct contact by intrusive maintenance workers and potentially construction workers with VCH impacts and minor B(a)P, metals and TRH in fill soils.	Intrusive maintenance workers
Publicly accessible park, Pedestrian Link, Roadways	– Inhalation of VCHs by park users – Direct contact from soils potentially containing VCH, B(a)P, metals, TRH	Users of the publicly accessible park area
	– Inhalation of VCH by members of the public – Limited potential for direct contact/exposure to dusts due to mostly paved roadway and pedestrian link areas	Roadways and Pedestrian Link users
	– Inhalation from VCH soil vapour within a trench – Direct contact by intrusive maintenance workers and potentially construction workers with VCH impacts and minor B(a)P, metals and TRH in fill soils.	Intrusive maintenance workers
Park, minor landscaping areas	– Senversa (2023c) reported that the habitat value of the site is negligible with limited environmental values present requiring protection.	Terrestrial ecology

Table notes

– *Senversa (2023c) reported that groundwater users – through direct ingestion – were not considered as part of the CSM because groundwater extraction is banned as the area is located within the Botany Sands management zone.*

– *The Senversa (2023c) report assumed that all future site structures would include basement levels, and given the relatively shallow depth of groundwater at the site (generally 2-4m bgl), it was anticipated that all basement levels would intersect groundwater. Senversa also noted that the General terms of approval from Water NSW in D/2020/45) specified that future building basements below the water table are to be 'tanked' i.e. fully watertight for the anticipated life of the building. Notwithstanding, the Senversa HHRA conservatively assumed that there was potential for groundwater to enter the basements (via cracks etc).*

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7. Stage 1 characterisation reports

Subsequent to issue of the Section B5 SAR in March 2021, several assessments have been completed which were ultimately used to facilitate the preparation of the RVP and RWP. These assessments are listed below with a summary of relevant objectives, scope of works and findings presented in **Table 5:**

– Senversa (2022a) Sampling and Analysis Quality Plan – Stage 1: Jeffman Danks Street South Precinct, Waterloo, NSW (Revision 0, 29 April 2022) (the **SAQP**)
– Senversa (2022b) Detailed Site Investigation – Stage 1: Jeffman Waterloo Development, Waterloo, NSW (Revision 1, 23 November 2022) (the **Stage 1 Data Gap DSI**)
– Senversa (2022c) Human Health Risk Assessment, Jeffman Waterloo Development, Waterloo NSW (Revision 1, 23 November 2022) (the **HHRA**)
– Senversa (2023a) Technical Memorandum – Results of additional sampling conducted in March 2023 (Revision 0, 19 May 2023) (**Additional sampling results)**

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Table 5 Summary of Stage 1 characterisation reports

Report	Objective	Scope of works	Findings
SAQP (Senversa, 2022a)	Document data quality objectives and sampling, analytical and reporting requirements of the supplementary DSI to address data gaps identified in the RAP.	NA	NA
Stage 1 Data gap DSI (Senversa, 2022b)	Address the data gaps identified in the RAP relevant to Stage 1. This principally relates to refining the extent of contamination requiring remediation.	The data gap DSI included an intrusive investigation and sampling program within the accessible portions of the site, with several locations inaccessible owing to the presence of building structures. The investigation included: – Drilling/excavation of 20 soil bores/test pits – Installation of nine soil vapour bores – Installation of 10 groundwater monitoring bores, with aquifer slug testing within five of the bores – Membrane Interphase Probe testing at 13 locations – Development of site specific assessment criteria as part of the HHRA (Senversa, 2022c) and applied in the DSI – Further delineation testing within and near RA2.	– Two USTs were suspected. Soil, soil vapour and groundwater samples from near the USTs did not identify significant hydrocarbon contamination – VCH contamination not detected within RA1 (noting some access restrictions) – Soils within the footprint of the substation could not be sampled – No significant soil, groundwater and soil vapour VCH contamination noted in northern portions of Parcel 1, pedestrian link and Parcel 2. – Senversa (2022b) reported that leachability results and soil headspace vapour indicated that the adopted RBSL's are likely conservative.
HHRA (Senversa, 2022c)	Revision of the interim site-specific screening levels for VCHs that were presented in the RAP based on additional information available on the features of site development. The B(a)P screening values	Calculation of risk based screening levels (RBSLs) using existing site data and assumptions of future development.	Revised RBSLs were developed within the HHRA to be used for site validation purposes.

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Report	Objective	Scope of works	Findings
	in ASC NEPM were also refined in the HHRA to reflect actual site conditions and identified ecological and human health receptors.		
Additional sampling results (Senversa, 2023a)	The RAP identified that a key step in delivering the remediation was to conduct further site characterisation works associated with each parcel, the results of which were to be used to refine (if necessary) the extent of remediation – and to be documented in a remedial works plan (RWP). Supplementary sampling was conducted in March 2023 following demolition works. The objectives of the assessment were to address remaining data gaps associated with the presence of the former buildings.	Drilling and test pitting at various locations across Stage 1 including soil and soil vapour testing.	The key outcomes of the works completed in March 2023 were: – No changes to remedial extents in Parcel 1 were proposed. The data confirmed the previous evaluation of remedial extents (as presented in Stage 1 Revision Memo) that remediation of Area 1 was not warranted. – Senversa recommended that Remediation Area 2 (RA2) (in Parcel 4) should be extended to the east to the boundary of Stage 1/Stage 2. Senversa recognised there was some variability in data sets (in particular groundwater and soil vapour) and while there may be some soils/groundwater within the zone that do not require remediation, extension of RA2 will offer greater surety of achieving remedial goals including control of flow of contaminated groundwater from adjacent source areas to the east (in Stage 2). – Asbestos was found at additional locations and Senversa recommended that the contractor will need to develop an approach to avoid mixing ACM with soil that will be subject to power screening as part of the treatment of chlorinated solvent contaminated soils in RA2.

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7.1 Auditor discussion: Stage 1 characterisation reports

The auditor reviewed the DSI report to evaluate if data gaps outlined in the RAP (Senversa, 202a) had been addressed and to confirm that the report had been prepared in a manner consistent with the consultant guidelines and the NEPM (2013). The auditor presented interim audit advice (IAAs) which noted that additional soil and soil vapour sampling was required (following the demolition of site structures) during Stage 1 validation. The results of the additional sampling were presented within Senversa 2023a). The auditor reviewed the Senversa (2023a) report and concluded that the scope was consistent with the SAQP (Senversa, 2022a) and allowed for the collection of information to address potential data gaps identified in previous reports. The auditor also concluded that the report included key elements as required by the NSW EPA for a site characterisation report.

The auditor noted that some asbestos had been identified by Senversa in areas where asbestos had not previously been encountered, the auditor commented that the remediation contractor should develop an approach to avoid mixing ACM with soil that will be subject to power screening in all areas of the site where fill was observed.

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8. Remediation and Validation plans

Following submission of the RAP, Senversa prepared the following work plans or updates to the remedial approach based on the characterisation reports summarised in **Section 7**:

– Senversa (2022d) Technical Memorandum - Revision of RAP Remediation Extents in Stage 1 Area (REV 1, 24 November 2022) (**the Revision of RAP Remediation Extents**)
– Senversa (2023b) Remediation Works Plan – Stage 1: Jeffman Danks Street South Precinct, Waterloo, NSW (REV 02, 29 August 2023) (**the Stage 1 RWP**)
– Senversa (2023c) Validation Works Plan – Stage 1 Remediation: Jeffman Danks Street South Precinct, Waterloo, NSW (REV 02, 30 August 2023) (**the Stage 1 VWP**)
– Senversa (2024a) Change in land use remediation end point: Jeffman Danks Street, NSW (REV 0, 01 May 2024) (**the change in land use remediation end point letter**)
– Senversa (2024b) Update to risk based screening levels: Jeffman Danks Street (Revision 0, 06 June 2024) (**the RBSL amendment letter**)
– Senversa (2024c) Validation assessment approach for the pedestrian link (Revision 0, 11 June 2024) (**the pedestrian link validation approach**).

A summary of the objectives, scope of works and findings of the remediation and validation planning reports is presented within **Table 6**:

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Table 6 Summary of Stage 1 remediation and validation plans

Report	Objective	Scope of works	Findings
The Revision of RAP remediation extents (Senversa, 2022c)	The remediation extents presented within the RAP (Senversa, 2021a) were preliminary and intended to be revised based on the results of the HHRA (Senversa, 2022c) and the Data Gap DSI (Senversa, 2022b). The report objectives were to present the refined remediation extents (remediation areas-RAs) based on risk based screening levels (RBSLs), data gap DSI results and revision of health and ecological investigation levels for benzo(a)pyrene.	Presented the refined remediation extents for Stage 1	The original remediation areas (presented in the RAP) were revised based on the results of additional sampling as part of the Data Gap DSI and application of the RBSLs. The main change compared to the original RAP was that Senversa determined that remediation of RA1 was not required make the site suitable.
The Stage 1 RWP (Senversa, 2023b)	The RWP was prepared to detail the remediation methods, extents and procedures of the proposed remediation at Stage 1.	Documented known extent of contamination within Stage 1 that required remediation. Documented the remediation methodology. Documented the design and execution requirements developed by the remediation contractor to meet remedial objectives set out in the RAP.	NA
The Stage 1 VWP (Senversa, 2023c)	Document the data quality objectives (DQOs) and detailed methodology required to validate whether remediation meets the objectives set out in the RAP (Senversa, 2021a).	The VWP detailed remediation DQOs and the detailed methodology for the proposed remediation at Stage 1, including documenting e.g. roles and responsibilities, presenting criteria for different remediation areas etc	NA
Change in land use remediation end point letter (Senversa, 2024a)	The risk based screening levels (RBSLs) calculated as part of the HHRA (Senversa, 2002c) were based on the original understanding of the proposed site layout (as per the site layout presented within the concept designs in the DA). In 2024, Jeffman requested that most of Stage 1 (refer to Section 2) be remediated to allow mixed commercial/medium-high density residential. To facilitate this aim, Senversa needed to review various data and assess if the majority of the site was suitable for the 'change in land use' or if additional works	Senversa reviewed the historical dataset in the context of the requested 'change in land use'.	Senversa identified that the following RBSLs required revision based on proposed end use changes requested by Jeffman: – RBSLs protective of vapour intrusion into basements required revision – VHC RBSLs applied to Remediation Area 1 (RA1) – Non VHC RBSLs applied to the roadway parcel. Senversa noted that some reasonable assumptions (with regards to

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Report	Objective	Scope of works	Findings
	were required etc. As part of this process, Senversa also needed to generate updated risk based screening levels (RBSLs)		building/basement layout) were warranted to avoid the derivation of unnecessarily conservative RBSLs.
The RBSL amendment letter (Senversa, 2024b)	In 2024, Jeffman requested that, for commercial reasons, the Stage 1 remediation should ensure all portions of the site will be suitable for mixed medium-high density residential/commercial (to provide flexibility to future developers with respect to the future site layout). The exceptions are the pedestrian link and the park (the locations and orientations of which are fixed as per the DA concept plans). This update to the proposed Stage 1 layout meant that some of the assumptions used to derive the RBSLs in the HHRA (Senversa, 2022c) (including configuration of structures and basements) was no longer applicable and so the RBSLs required updating to reflect that medium-high density residential structures could be built within any portion of the site (excluding the Pedestrian Link and the proposed Public Park). The following RBSLs were updated: – Soil vapour intrusion RBSL (including building with a basement scenario and building structure constructed on an 'at grade' slab scenario) – Groundwater RBSL relating to seepage of groundwater into a basement and subsequent volatilisation into air spaces within the building/basement – RBSL relating to soil leaching/partitioning to groundwater from saturated/vadose zone soils followed by seepage into a basement and volatilisation into air spaces within the building/basement. – Soil RBSL protective of partitioning into groundwater and the Management Order sum of significant contaminants criterion of 0.5mg/L	In deriving the updated RBSLs, Senversa considered several assumptions: – Vapour modelling was based on the standard commercial and residential building parameters used for the derivation of health screening levels (HSLs) as presented in the ASC NEPM (2013) – RBSLs were developed for both a slab on grade building and a building with a basement level – The groundwater and soil RBSLs assume that in scenarios where buildings have basements, that at least one level of the basements intersects contaminated groundwater and the basement is not tanked (i.e. groundwater can enter) – Any basement levels are used as car parks and are not a place of work or a residential apartment – Conservatively assumed that any basements are orientated with the longest side perpendicular to groundwater flow within the groundwater plume. – Senversa (2024b) report that all other assumptions built into the model are consistent with the original RBSL's as summarised within the HHRA.	The report presents revised RBSLs for the following analytes and media types: – Soil vapour RBSL for VHC compounds (for both slab on grade setting and basement setting). The revised soil vapour RBSLs were reduced by a factor of 3-4 form the original RBSL presented in the HHRA. – Groundwater RBSLs for VHC compounds for both a smaller residential size basement and larger commercial size basement. – Soil leaching to groundwater RBSL for VHC compounds. – Senversa also derived revised RBSLs for soil values protective of the management order for various VHC compounds. – The RBSL's applicable to benzo(a)pyrene (originally derived in the HHRA) were based on generic land use assumptions and did not require revision.
The pedestrian link validation approach (Senversa, 2024c)	Provide further information on the proposed approach to validate the proposed pedestrian	The letter report set out validation criteria and the proposed methods to remediate the pedestrian link. The	Validation criteria for the northern and southern portions of the pedestrian link were set out in the report. The northern

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Report	Objective	Scope of works	Findings
	link located within the Danks Street Easement.	proposed remediation methods were based on some sampling which had been undertaken as part of the Stage 1 DSI (Senversa, 2021b) and pre-remediation test pit/trench sampling.	portion was proposed to be validated against commercial/industrial criteria. The southern portion was proposed to be validated against mixed medium-high density residential land use criteria.

8.1 Auditor discussion: Remedial documents

The auditor provided commentary on the RWP (Senversa, 2023b) the VWP (Senversa, 2023c) and the revision of the RAP remediation extents (Senversa, 2022c) in an interim audit advice letter (Jeffman Danks Street South Precinct, Waterloo, NSW, Interim Audit Advice 09, GHD, 6 September, 2023). In preparing the interim advice letter, the auditor considered whether the Stage 1 RWP and Stage 1 VWP were prepared in a manner consistent with guidelines made or endorsed by the NSW EPA. It was the auditor's opinion that the Stage 1 RWP contained the key elements required for a RAP as outlined in the Consultant's Guidelines and the Auditor's Guidelines. The auditor also noted that the Stage 1 VWP was prepared in a manner consistent with the requirements for a sampling plan as listed in the Consultant's Guidelines. The auditor also noted that validation criteria (presented in the VWP) were based on NSW EPA endorsed investigation levels or site-specific target levels (derived using a human health risk assessment that adopted the approach as listed in the NEPM 2013) and the number and locations of samples to be collected in the areas to be validated were consistent with those listed in the *Sampling Design Guidelines*.

The auditor agreed that Senversa would need to review the existing dataset in the context of the updated understanding of the future site layout and derive updated RBSLs which should be based on a reasonable set of end land use assumptions, endorsed by Jeffman.

The auditor was subsequently satisfied that the assumptions used by Senversa (2024b) in modelling the revised RBSLs are reasonable. The auditor is also satisfied that the calculations used by Senversa to derive the updated RBSLs appear to be correct.

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9. Stockpile and Materials Management

Senversa (2024i) reported three types of stockpiles being managed at Stage 1:

– ‘Treated soils’ i.e. all soils from RA2 and some soils from RA7 (known to be impacted by VCHs and therefore treated using the track mounted power screen and soil vapour treatment system)
– ‘Un-treated’ i.e. soils excavated from the site for which no treatment was required as no VCH were recorded
– Excavated soils and fill materials which could not be re-used on site (potentially because they were contaminated or there were aesthetic issue) were segregated, subject to waste classification assessment and removal from the site.

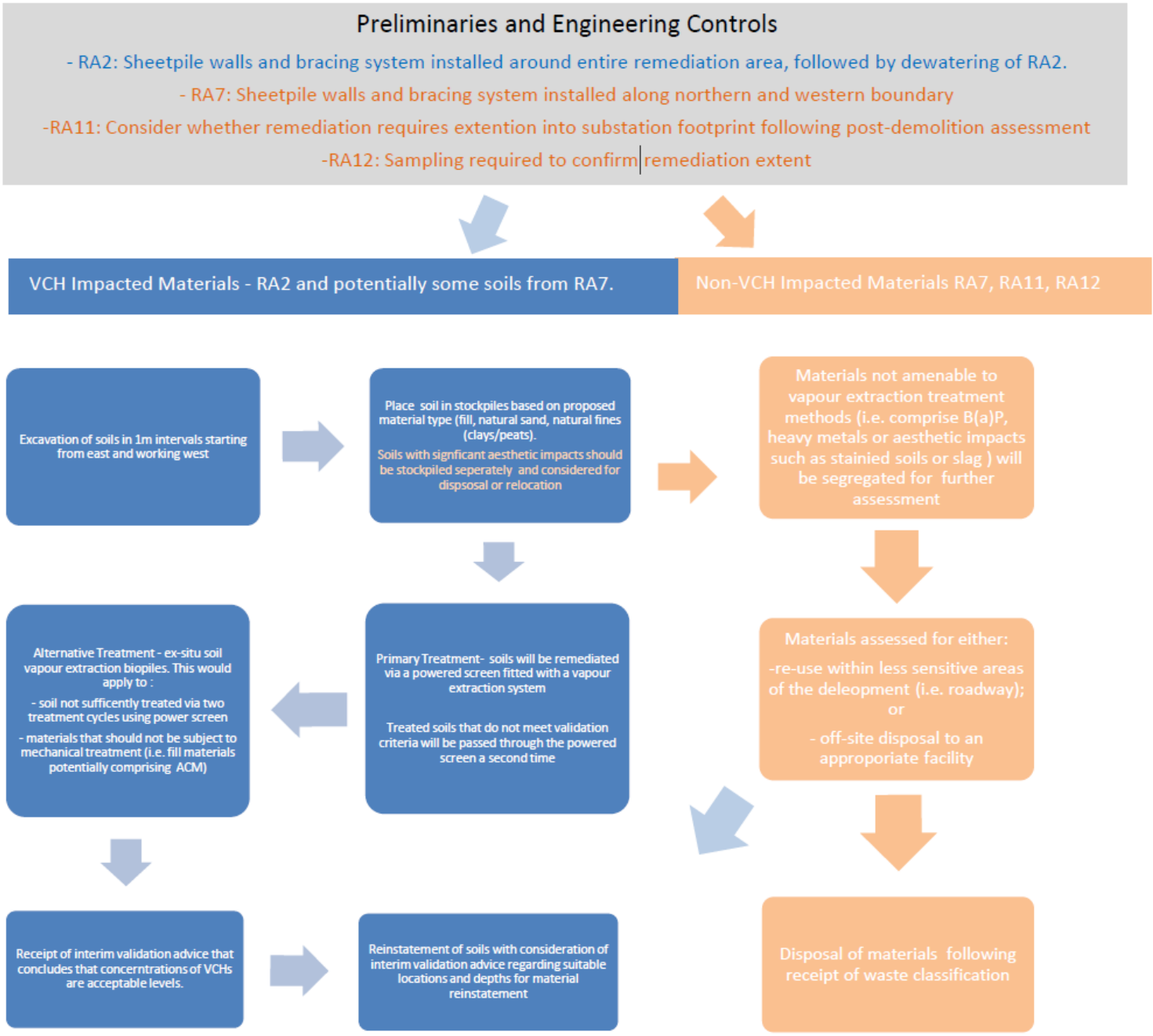
9.1 Treated stockpiles

With reference to diagram 1 below (extracted from Senversa, 2023c), materials excavated from the specified remediation areas (RAs) were segregated following excavation based on observed material type. Material not observed to comprise ACM impacts was loaded onto a MS13Z track mounted power screen in conjunction with a skid mounted soil vapour treatment system fitted with a vapour extraction system and aerator to undergo treatment.

Following treatment, the material was stockpiled for validation sampling in accordance with the VWP. If the post treatment validation sampling (for VCHs) indicated the material was suitable for on-site reuse, it was re-used on site.

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Diagram 1 *Flow chart of treatment process (extracted from the Validation Work Plan (VWP) (Senversa, 2023c)*



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Table 7 Summary of treated stockpiles

Stockpile name (report ref.)	Material source/ source depth	Estimated total volume (m3)*1	Destination and placement depth	Auditor has reviewed and auditor comments addressed in final version of report? ✓/✗
TSP001 (Senversa, 2024ao)	RA2/0.1-0.4m bgl	378	TSP001, 002 and 003 were reportedly combined to form TSP008.	NA
TSP002 (Senversa, 2024ao)	RA2/0.4-0.6m bgl	327		NA
TSP003 (Senversa, 2024ao)	RA2/1.0-1.5m bgl	259		NA
TSP004 (Senversa, 2024ap)	RA2/1.5-2.0m bgl	336	Failed initial treatment validation and then re-treated and re-validated and subsequently approved. Material used as backfill within park area.	✓
TSP005 (Senversa, 2024aq)	RA2/1.5-2.0m bgl	400	Used as backfill at RA2, placed at around 2-3m bgl	✓
TSP006 (Senversa, 2024ar)	RA2/2.0-2.5m bgl	380	Used as backfill at RA7	✓
TSP007 (Senversa, 2024as)	RA2/2.0-2.5m bgl	340	Used as backfill at RA7	✓
TSP008 (Senversa, 2024at)	Formed from TSP001, 002 and 003.	964	Used as backfill in of RA2	✓
TSP009 (Senversa, 2024au)	RA2/2.5-3.0m bgl	408	Used as backfill in western portion of RA2	✓
TSP010 (Senversa, 2024av)	RA2/2.5-3.0m bgl	228	Used as backfill in western portion of RA2	✓
TSP011 (Senversa, 2024aw)	RA2/3.0-3.5m bgl	312	Used as backfill in western portion of RA2	✓
TSP012 (Senversa, 2024ax)	RA2/3.5-4.0m bgl	320	Used as backfill in western portion of RA2, placed at 3.5 – 4.0m bgl.	✓
TSP013 (Senversa, 2024ay)	RA2 ramp/1.5-2.0m bgl	240	Used as backfill in eastern portion of RA2	✓
TSP014 (Senversa, 2024az)	RA2 ramp/1.5-2.0m bgl	100	Used as backfill in eastern portion of RA2	✓
TSP015 (Senversa, 2024ba)	RA2/4.5-5.0m bgl	18	Used as backfill in eastern portion of RA2, placed at 2-3m bgl.	✓
TSP016 (Senversa, 2024bb)	RA2/4.5-5.0m bgl	200	Used as backfill in eastern portion of RA2, placed at 2-3m bgl.	✓

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Stockpile name (report ref.)	Material source/ source depth	Estimated total volume (m3)*1	Destination and placement depth	Auditor has reviewed and auditor comments addressed in final version of report? ✓/✗
TSP044 (Senversa, 2024bc)	South of RA11/1.0-1.5m bgl	110	0.0-0.5m bgl – roadway south	✓

Table notes

*1 EPS and Senversa have both provided estimates of stockpile volumes, the estimates mostly correlate, but in some instances there are minor differences. For the purposes of this SAR, the Senversa estimates are used.

9.2 Untreated stockpiles

With reference to Diagram 1, material excavated from other areas not suspected to be impacted with VCHs was sampled for other contaminants of concern and either validated as suitable for re-use on site (these stockpiles are summarised within Table 8) or disposed off-site (these stockpiles are summarised within Table 9).

Table 8 Summary of un-treated stockpiles

Stockpile name (report ref.)	Material source/ source depth	Estimated total volume (m3)*1	Senversa conclusions*1	Destination and placement depth	Auditor has reviewed and auditor comments addressed in final version of report? ✓/✗
SP013 (Senversa, 2024bd)	Excavated from RA7 tank pit sands from 0.2-1.0m bgl.	4m^3	Senversa (2024i) reported that validation sampling indicated the stockpile was suitable for on-site re-use within Development Parcels 1,2,3 and 4 and within Public domain areas (i.e. road or park).	Backfilled within RA7	✓
SP024 (Senversa, 2024be)	Natural clays excavated from RA2 from around 4.0-4.5m bgl	50 m^3		Backfilled into south-west corner of RA2	✓
SP025 (Senversa, 2024bf)	Natural clays excavated from RA2 from around 4.0-4.5m bgl	450 m^3		Backfilled into south-west corner of RA2	✓
SP028 (Senversa, 2024bg)	Sediment from de-watered fines from the water treatment plan for water pumped from Stage 1 excavations	2.7 m^3		Backfilled into RA11	✓
SP030	Parcel 1 – northern section closes to Danks Street	500m^3	Visual assessment indicated stockpile not impacted by asbestos. Material was segregated and sampled progressively. Seventeen asbestos quantification samples completed which indicated that bonded ACM was not present in stockpiles above validation criteria.	Main audit area	**A summary of SP030 is included within Senversa (2024h) – this report has been reviewed by the auditor**

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Stockpile name (report ref.)	Material source/ source depth	Estimated total volume (m3)*1	Senversa conclusions*1	Destination and placement depth	Auditor has reviewed and auditor comments addressed in final version of report? ✓/✗
SP031	Fil material source from near the brick wall on Parcel 1 from around 0.1-0.5m bgl.	600 m^3	Visual assessment indicated stockpile not impacted by asbestos. Material was segregated and sampled progressively. Thirteen asbestos quantification samples completed which indicated that bonded ACM was not present in stockpiles above validation criteria.	Main audit area	**A summary of SP031 is included within Senversa (2024h) – this report has been reviewed by the auditor**
SP034 (Senversa, 2024bh)	Fill sands excavated from RA11 from around 0.5-1.0m bgl	40 m^3	The SP034 report indicates that SP034 contained trace foreign materials and a single exceedance of ecological criterion for copper suggesting it may not be suitable for use as accessible soils in the park area. Asbestos not reported in tested samples.	RA11	✓
SP036 (Senversa, 2024bl)	Segregated fill formed during segregation of concrete from soil during loadout. Material was sourced from outside VCH remediation areas and was generally excavated from across stage 1 from around 0.0-0.3m bgl.	205m^3	Validation sampling indicated the stockpile was suitable for on-site re-use within Development Parcels 1,2,3 and 4 and within Public domain areas (i.e. road or park).	Ramp between Stage 1 and Stage 2 where the retaining wall was located	✓
SP041 (Senversa, 2024bi)	Excavated from the east of former RA1 from around 0.8-1.2m bgl.	150 m^3	The SP041 report indicates that SP041 contained trace foreign materials and a single exceedance of ecological criterion for copper suggesting it may not be suitable for use as accessible soils in the park area. Asbestos not reported in tested samples.	0.0-1.0m bgl in south of parcel 1	✓
SP042	Oversize sandstone from south-east of parcel 1 at around 1m bgl	100 m^3		LDC UST	NA

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Stockpile name (report ref.)	Material source/ source depth	Estimated total volume (m3)*1	Senversa conclusions*1	Destination and placement depth	Auditor has reviewed and auditor comments addressed in final version of report? ✓/✗
SP045 (Senversa, 2024bj)	Excavated from RA11 from around 0.5-1.0m bgl	200 m^3	Validation sampling has indicated the stockpile is suitable for on-site re-use within Development Parcels 1,2,3 and 4 and within Public domain areas (i.e. road or park).	South of Parcel 1 driveway	✓
SP059 (Senversa, 2024bk)	Excavated from area south of former RA7 from around 0.2-2.0m bgl.	150 m^3	Validation sampling has indicated the stockpile is suitable for on-site re-use within Development Parcels 1,2,3 and 4 and within Public domain areas (i.e. road or park).	-	✓

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9.3 Waste management

With reference to the process described in Diagram 1, some of the excavated materials were disposed off-site to a licensed landfill, a summary which is presented in **Table 9**:

Table 9 Summary of waste management

Stockpile name (Report ref.)	Source area	Classification	Stockpile volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility	Waste class report provided and reviewed by auditor? ✓/✗
SP001 (Senversa, 2024r)	Soil from beneath concrete slab in RA2 >0.6m bgl. ACM noted to be present.	Special waste (asbestos waste), General solid waste (non-putrescible)	988 m^3	1,800 tonnes	Brandown Waste and Recycling (231.12 tonnes) and Bingo Waste Services Eastern Creek (1599.18 tonnes)	✓
SP002 (Senversa, 2024s)	Concrete from demolition of secondary subsurface slab	Special waste (asbestos waste), General solid waste (non-putrescible)	160 m^3	110.26 tonnes	Brandown Waste and Recycling	✓
SP004 (Senversa, 2024t)	Suspected slag fill material segregated during excavation of RA2 from 0.1-0.4m bgl.	General solid waste (non-putrescible)	4m^3	-	-	✓
SP006 (Senversa, 2024v)	Spoil from screening of fill material from RA2, from below secondary slab (0.1-0.4m bgl)	Special waste (asbestos waste), General solid waste (non-putrescible)	10 m^3	37.36 tonnes	Cleanaway Erskine Park	✓
SP007 (Senversa, 2024w)	Material collected from the oversize belt during material screening of SP005. Originally sourced from between the first and second slab	Special waste (asbestos waste), General solid waste (non-putrescible)	120m^3	1212.92 tonnes	Cleanaway Erskine Park	✓

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Stockpile name (Report ref.)	Source area	Classification	Stockpile volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility	Waste class report provided and reviewed by auditor? ✓/✗
	in RA2 from around 0.2-0.6m bgl.					
SP017 (Senversa, 2024x)	Material segregated for geotechnical purposes from fill excavated from 0.1-0.4m bgl in RA2.	Special waste (asbestos waste), General solid waste (non-putrescible)	100m^3			✓
SP018 (Senversa, 2024y)	Fill excavated from beneath the slabs at SP012 from around 0.3-0.6m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	45m^3			✓
SP032 (Senversa, 2024z)	Fill from between first and second slab from north-western corner of site in Parcel 1	Special waste (asbestos waste), General solid waste (non-putrescible)	70 m^3			✓
SP035 (Senversa, 2024ab)	Material segregated for geotechnical purposed in part parcel 1 from around 0.5-1.0m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	350 m^3			✓
SP010 and SP021 (Senversa, 2024u)	**SP010** – Material generated during removal of UST from 0.2-0.5m bgl **SP021** – Excavation of soil from RA7	Special waste (asbestos waste), General solid waste (non-putrescible)	SP010 – 450 m^3 SP021 – 150 m^3	1041.98 tonnes	Cleanaway Erskine Park	✓
SP033 (Senversa, 2024aa)	Material excavated from RA11 from	Special waste (asbestos waste),	20 m^3	1330.28 tonnes	Cleanaway Erskine Park	✓

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Stockpile name (Report ref.)	Source area	Classification	Stockpile volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility	Waste class report provided and reviewed by auditor? ✓/✗
	around 1.0-1.3m bgl.	General solid waste (non-putrescible)				
SP043 (Senversa, 2024ae)	Excavated from beneath second slab to the west of RA2 from around 0.6-1.0m bgl. 25m3 of material from SP046 also added.	Special waste (asbestos waste), General solid waste (non-putrescible)	350 m^3			✓
SP047 (Senversa, 2024ag)	Excavated from north of RA2 from around 0.5-1.0m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	100 m^3			✓
SP048 (Senversa, 2024ah)	Excavated from NE Parcel 1 from around 1-1.2m bgl.	Special waste (asbestos waste), General solid waste (non-putrescible)	60 m^3			✓
SP038 (Senversa, 2024ac)	Material excavated from below the second slab in the southwest corner of Parcel 1 at around 1m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	200 m^3	1138.34 tonnes (this material reportedly also included 10m3 of material sourced from SP037 from Stage 2 site)	Cleanaway, Erskine Park	✓
SP040 (Senversa, 2024ad)	As above but from around 1.5m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	30 m^3			✓
SP039, SP060 and SP061 (Senversa, 2024af)	**SP039 –** ashy fill excavated during Parcel 1 slab removal **SP060 –** Fill from EXTP069	Special waste (asbestos waste), General solid waste (non-putrescible)	SP039 – 10m^3 SP060 and SP061 – 5m^3	-	-	✓

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Stockpile name (Report ref.)	Source area	Classification	Stockpile volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility	Waste class report provided and reviewed by auditor? ✓/✗
	SP061 – Fill from EXTP061					
SP050	Danks Street easement north from around 0.3m bgl	Special waste (asbestos waste), General solid waste (non-putrescible	$10m^3$	See SP056	See SP056	Consolidated with SP056 for disposal
SP051 (Senversa, 2024ai)	Excavated fill material post screening from the south of driveway and Parcel 1 from an approximate depth of 0.1 – 0.5m bgl.	Special waste (asbestos waste), General solid waste (non-putrescible)	$210m^3$	1200.38 tonnes	Bingo Waste Services, Eastern Creek	✓
SP052 (Senversa, 2024al)	Excavated fill material from Danks Street pedestrian walkway from an approximate depth of 0.1 – 1m bgl.	Special waste (asbestos waste), General solid waste (non-putrescible)	$175m^3$			✓
SP054 (Senversa, 2024aj)	Excavated fill from Dank Street pedestrian walkway from around 0.2-0.8m bgl.	Special waste (asbestos waste), General solid waste (non-putrescible)	$85\ m^3$			✓
SP055 (Senversa, 2024ak)	Excavated fill from Dank Street pedestrian walkway from around 0.1-1.0m bgl.	Special waste (asbestos waste), General solid waste (non-putrescible)	$60\ m^3$			✓

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Stockpile name (Report ref.)	Source area	Classification	Stockpile volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility	Waste class report provided and reviewed by auditor? ✓/✗
SP053	Excavated oversize fill material from south of RA7 at 0.5-1.0m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	Consolidated with SP057 for disposal	See SP057	See SP057	Consolidated with SP057 for disposal
SP056 (Senversa, 2024am)	Fines and road base material from under Dank Street easement from around 0.1-0.2m bgl. SP050 (10m3) was reportedly consolidated with SP056 for disposal.	Special waste (asbestos waste), General solid waste (non-putrescible)	40m^3	-	-	✓
SP057 (Senversa, 2024an)	Excavated fill from south of Danks Street pedestrian walkway and south of RA7 from around 0.2-1.2m bgl. Also comprises ashy material within SP039 and SP053 and material from SP060 and SP061.	Special waste (asbestos waste), General solid waste (non-putrescible)	612 m^3	880.92 tonnes	Cleanaway Erskine Park	✓
SP060	From EXTP69 1.5-1.8m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	5m3	See SP057	See SP057	SP060 and SP061 were consolidated with SP057 for disposal
SP061	From EXTP65 at 1.5-1.8m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	5m3	See SP057	See SP057	

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Stockpile name (Report ref.)	Source area	Classification	Stockpile volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility	Waste class report provided and reviewed by auditor? ✓/✗
SP062 (Senversa, 2024ao)	Excavated from additional test pit excavated from south of RA7 from around 1.5-1.8m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	$20m^3$	-	-	✓
SP068 (Senversa, 2024ap)	Excavated fill material from VTP14 in roadway from an approximate depth of 0 – 1m bgl	Special waste (asbestos waste), General solid waste (non-putrescible)	$23m^3$	-	-	✓

Table notes

- The Auditor notes that some information for some stockpiles is missing. The Auditor has requested this information but at the time of issuing this SAR has not received it.

9.3.1 Concrete Waste

Senversa (2024i) report that a total of 5586.88 tonnes of concrete material was removed from the site, this material was reportedly taken to a range of recycling facilities including: Metropolitan Demolition, Concrete Recyclers – Camelia, Bing Recycling Eastern Creek, EBH Wyong, Ecorr-Wetherill Park, Widemere Recycling, Metro, EBH Concrete Recycling, Boral Recycling Wetherill Park, Porter Creek Depot, Camelia.

9.3.2 Steel waste

Senversa (2024i) report that a total of 134.22 tonnes of mixed steel was removed from the site and submitted to SIMS Metal Management – St Peters and Sell and Parker – Banksmeadow.

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9.3.3 Liquid waste

Table 10 Summary of liquid waste removed from the site

Source	Classification	Estimated volume (m^3)	Tonnage recorded on tipping dockets	Receiving facility
Glicks UST – RA7	Oily water	5.6	2.68	Bulk recovery solutions
Grease Trap in Parcel 1	Grease	7.0	1.5	Cleanaway St. Marys
LDC UST	Liquid	27	9.08	South Windsor

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9.4 Validation of imported materials

9.4.1 VENM and quarried materials

Senversa (2024i) reported that Virgin Excavated Natural Material (VENM) was imported to the site to backfill excavations and to meet design levels. Senversa provided the auditor with VENM reports to review. A summary of the volumes and source of the imported material is presented within **Table 11**:

Table 11 Summary of VENM and quarried material imported to the site

VENM source	VENM report reference	Imported VENM volume (m^3)	Imported material subject to testing and analysis on arrival at Stage 1 site?	Auditor satisfied that the material imported to the site meets the definition of VENM or is otherwise suitable for importation to the site
2-10 Bay Street, Double Bay, NSW	Senversa (2024m)	'Up to 2,000m^3' of excavated sand (pale yellow/yellow) and sandstone rock (orange/red/white, weathered'.	☑	☑
26-42, Eden Street, ARNECLIFFE	Senversa (2024o)	'Up to 2,456m^3' of excavated sandstone (medium grained, weathered, pale yellow to light brown)	☑	☑
2-10 Darling Drive, Sydney, NSW	Senversa (2024q)	'Up to 190m^3' of red/brown/grey mottled highly weathered sandstone and sandy clay (excavated sandstone)	☑	☑
Hanson Bass Point Quarry Quarried Products	Senversa (2024p)	'Up to 500m^3' of quarried product comprising 10-20mm aggregate and 20mm type DGB road base (DGB20)	☑	☑

9.4.2 Mulch

Senversa (2024i) reported that mulch was imported to the site for use as a soil improvement. The mulch was placed in several locations including around the root zones of the retained trees located on the western and northern perimeter of Stage 1. Senversa report that all imported mulch was generated from mixed leaves and woodchips only. A summary of imported mulch is presented in **Table 12**.

Table 12 Summary of imported mulch

Mulch source	Imported mulch report reference	Imported mulch volume (m^3)	Imported material subject to testing and analysis on arrival at Stage 1 site?	Auditor satisfied that the material imported to the site is suitable?
BC Sands, 26 Atkinson Road, Taren Point (reportedly generated from mixed leaves and woodchips)	(Senversa, 2024n)	Senversa reported 'approximately 120m^3'.	☑	☑ GHD has conducted a consolidation of BC Sands delivery dockets which indicate that 125.65m^3 of mulch was imported for use at Stage 1.

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9.5 Auditor discussion: Imported materials and waste and stockpile management

Senversa generally prepared individual reports for each of the 'treated stockpiles', the 'un-treated stockpiles' and for each of the soil stockpiles that required off-site disposal to a licensed landfill. The auditor notes that some materials requiring off-site disposal were 'pre-classified' under NSW EPA (2014) guidelines and therefore waste classification reports were not presented for some waste types. Where provided by the validation consultant, each report was subject to auditor review and commentary. Auditor comments were presented in interim audit advice spreadsheets presented in Appendix B. The auditor accepted that the sampling and validation of stockpiles retained and re-used on site was appropriate and generally complied with the requirements of the RWP (Senversa, 2023b) and the VWP (Senversa, 2023c) and applicable NSW EPA guidelines.

The auditor noted that the waste classification reports provided for auditor review generally met the requirements of the NSW EPA (2014) Waste Classification Guidelines: Part 1 – Classifying Waste.

The auditor was satisfied that the imported material information presented for auditor review demonstrated that imported material was suitable for re-use on site.

As noted in Table 9, some disposal information was missing for several stockpiles. The auditor had requested this information from Senversa but did not receive it prior to completion of this audit report. However, the discrepancy is considered relatively minor given that it applies to approximately 100m^3 of soil and that the auditor would not suspect that material would have been inappropriately disposed off site given the calibre and integrity of the consultant and remediation contractor.

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10. Validation reports

As part of the validation works, Senversa provided the auditor with the following documentation:

– Senversa (2024j) Excavation Surface Validation Remediation Excavation - RA2. REV 1 (Senversa, 16 September 2024) (**RA2 validation report**)
– Senversa (2024k) Excavation validation - Part of Lot 4 in DP 600884 (RA7, RA12 and Pedestrian Link. REV 1 (Senversa, 13 September 2024) (**RA7, RA12 and Pedestrian Link Validation Report**)
– Senversa (2024l) Excavation Surface Validation: Stage 1 remediation RA11. REV 2 (03 October 2024) (**RA11 validation report**)
– Senversa (2024f) Stage 1 Remediation – RA1 Vapour Assessment: Jeffman, Waterloo. REV A, (Senversa, 12 July 2024) (**the RA1 vapour assessment**)
– Senversa (2024g) Groundwater Validation: VCH Migration Control and Post-Remediation Verification - Stage 1 Remediation. REV 1 (13 September 2024) (**Stage 1 groundwater validation assessment**)
– Senversa (2024h) Validation of soils remaining in-situ outside of RWP Remediation Areas – Stage 1. REV 1 (Senversa, 19 September 2024)
– Senversa (2024i) Stage 1 Remediation Validation Report: Part Danks Street South Precinct, Waterloo, NSW. REV 1 (Senversa, 04 October 2024).

A summary of the objectives, scope of works, key findings and auditor's commentary of the above reports is presented in **Table 13** to **Table 15** below:

10.1 Validation of remediation areas

Senversa presented several reports for auditor review relating to the validation of the identified remediation areas (RA). The objectives, scope of works, findings and auditor commentary associated with each of these reports is presented in **Table 13**:

Table 13 Summary of remediation area validation reports

Report	Objective	Scope of works	Findings	Auditor commentary
Excavation Surface Validation Remediation Excavation - RA2 (Senversa, 2024j)	Present validation results for remediation excavation RA2.	The site features discussed in the following text are presented within **Figure 3, Appendix A** (adapted from Senversa, 2024h). Senversa (2024j) reported that sheet pile walls were installed around the perimeter of RA2 to allow excavations to be advanced to depths of up to 5m bgl. Groundwater within RA2 was progressively extracted during excavation works which was then subject to treatment via an on-site treatment plant prior to off-site disposal via trade waste. When the excavation was complete (i.e. all fill materials removed and natural clays exposed and soil samples collected from the base) RA2 was backfilled with validated soils and the western, northern and southern sheet pile walls removed. The excavation walls were sampled and analysed for contaminants of concern, followed by sampling of the base of the excavation. Sixty one wall samples and 119 base samples were collected and analysed for VOCs, fill samples were also analysed for heavy metals, TRH, PAH, and asbestos. Selected samples were analysed for ASLP VCHs.	The general lithology encountered within RA2 included: concrete slab generally overlying several layers of fill (comprising silty or clayey sand or sand with trace anthropogenic fill inclusions – including some bonded ACM fragments) and slag (varying between approximately 1.5m to 4.5m thickness), overlying natural Botany Sands overlying residual clays. **Validation sample exceedances** – Eastern wall: Average PID results from samples collected was 14.8ppm (PID criteria was 5ppm). The eastern wall is located outside of the Stage 1 boundary, the soils in this area will be managed as part of the stage 2 remediation. – Western Wall: Slightly elevated VCH results above adopted RBSLs were reported within a sample collected from 2m depth. Senversa undertook additional 'step-out' testing on a 2.5m grid around the exceedance and no additional RBSL exceedances were noted. ASLP analysis was undertaken on the exceeding sample and VCH's were not reported above LOR. – Southern Wall: Average PID results along southern excavation wall were 2.38ppm (adopted criteria of 5ppm). Senversa also reported low and acceptable concentrations of other contaminants of concern within the southern wall with respect to health criteria. – Northern wall: Average PID results along northern excavation wall were 1.41ppm (adopted criteria of 5ppm). Senversa also reported low and acceptable concentrations of other contaminants of concern within the southern wall with respect to health criteria. – Excavation base: Senversa report that the base of the excavation would be below groundwater level and therefore groundwater exposure pathways would be the main hazard, however, there were limited detections of VCHs above LOR and no exceedances of RBSLs and no VCHs detected above LOR in base soil samples analysed for ASLP. Several elevated PID results were reported from base samples (average PID result was 5ppm), however Senversa did not malodours and therefore elevated PID results were potentially attributable to naturally occurring organic compounds – and the auditor is aware that PID readings can be recorded from many other substances, not just contaminants/chemicals. – In addition to the exceedances noted above, five wall samples were also reported with TRH greater than adopted ecological criteria. The exceedances were all located at 2m depth. Senversa stated that the ecological exceedances would be assessed in the context of the entire stage 1 within the site validation report.	RA2 excavation and subsequent validation sampling appeared to have been conducted in a manner generally consistent with the approved RWP and VWP. The auditor noted that the reported ecological exceedances detected in some excavation wall samples were at 2m bgl (generally ecological criteria only apply to the upper 2m of soil, except in arid environments) and that Senversa intended to consider ecological criteria exceedances on a more holistic, site wide scale within the final validation report.

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Report	Objective	Scope of works	Findings	Auditor commentary
Excavation Validation: Stage 1 Remediation – part Lot 4 in DP 600884 (RA7, RA12 and Pedestrian Link) (Senversa, 2024k)	Present validation results for remediation of the portion of Stage 1 located within Part Lot 4 (DP 600884) including RA7 and RA12.	The site features discussed in the following text are presented within **Figure 4, Appendix A** (adapted from Senversa, 2024h). RA7 and RA12 Senversa (2024k) reported that the initial driver for remediation at RA7 was removal of a UST and surrounding fill impacted by benzo(a)pyrene and TRHs. The remediation area however was expanded as some validation samples had exceedances of adopted validation criteria in some wall samples. Senversa (2024k) reported that RA12 was a small, isolated remediation area with remediation driven by elevated lead results in a shallow soil sample (the extent of which was defined by additional sampling). RA7 was remediated by removal of concrete slabs, installation of sheet piles (northern and western RA7 boundaries – to protect adjacent building structures), removal of a UST (no observed breaches or holes in tank) and removal of associated residual sand and oily water from the UST and surrounding backfill sands and fill materials down to around the top of the Botany Sands layer. RA7 was extended southward given presence of ACM observations and potential hydrocarbon/lead impacts. This southward expansion of RA7 connected RA12. Depth of excavation was generally to top of Botany Sands layer. Pedestrian Link (general) The RWP did not envisage that the Pedestrian Link (PL) would require remediation (beyond RA7 and RA12), however, test pitting within the PL during the fill verification process encountered asbestos (up to 1.8m bgl), lead and hydrocarbon impacted fill materials. At one test pit location, asbestos fibres were reported above adopted assessment criteria. Pedestrian Link: Northern extent This relatively small (60m^2), publicly accessible, asphalt surfaced area is located outside the site boundary gate at the northern extent of the pedestrian link. Senversa investigated this area by excavating one test pit (to 1m bgl) and two hand augers (to 0.5-0.7m bgl) – the base of fill was not encountered in this area. Pedestrian Link: Northern portion The northern portion of the pedestrian link was remediated by removing the concrete slab, installing a shoring system (to protect adjacent buildings), setting up environmental controls including asbestos exclusion zone, followed by excavating fill materials to the maximum practicable extent (which was approximately 2m below ground surface (bgs) within the central portion, and 1m bgs (eastern portion) and 0.9m bgs (western and north-eastern portion). Excavation depth was limited in these areas due to the presence of adjacent building footings (east and west portions) and due to geotechnical advice related to the structural integrity of the adjacent structures (central portion). In total, Senversa (2024k) reported that 87 excavation wall samples and 80 validation base samples were collected from the areas described above with soil samples generally analysed for heavy metals, BTEX, PAH, asbestos (%w/w) and VOCs, with selected samples analysed for PCBs.	**Validation results** Following excavation and removal of fill materials from the majority of the area (noting total depth of fill could not be removed from northern portion of pedestrian link due to geotechnical advice relating to the stability of adjacent structures), the excavation walls and bases were sampled for contaminants of concern, results are summarised below: RA7 and RA12 Two exceedances of ecological criteria were reported for copper and TRH in the western extent, Senversa concluded that these exceedances were low and acceptable based on statistical analysis. No other exceedances (including the adopted PID criteria) were noted within in this area. Pedestrian Link: Northern extent Soil samples collected from the single test pit and two hand auger locations did not report any exceedances of adopted assessment criteria and evidence of asbestos was not observed. The two hand augers and one test pit were terminated prior to reaching the base of fill materials. Pedestrian Link: Northern portion Senversa (2024k) reported that the vertical extent of fill could not be removed in the northern portion of the pedestrian link as fill was observed to extend up to 3m bgl in this area. Following the excavation to the extent practicable and safe, Senversa collected validation samples from the walls and base of the excavations. Five exceedances of adopted human health validation criteria (related to PAH, TRH, lead and B(a)P TEQ) were recorded in this area, with each exceedance located along the excavation wall which forms the shared boundary with Stage 2. Senversa considered these samples to be located 'off-site' and furthermore, have indicated that these soils are planned to be removed as part of the Stage 2 works. Senversa concluded that '*limited exceedances of conservative health based criteria remain'* in this area – this was supported by Senversa's statistical review of the data set that determined that remaining exceedances presented a low and acceptable risk based on future land use setting of the northern portion of pedestrian link, namely a pedestrian walkway and the southern portion of the pedestrian link being potentially used for mixed use medium-high density residential and/or commercial use. Friable asbestos exceeding health screening levels was reported at 2m bgs and 3m bgs within DSTP09 (located in the south-eastern area of the northern portion of the pedestrian link). Asbestos was detected in four other excavation base samples within the northern portion of the pedestrian link but below health screening levels. The only other reported asbestos exceedances (above adopted health screening levels) were reported at 1m below ground surface along the shared Stage 1/Stage 2 boundary – Senversa considered these exceedances are located off-site and indicated that these fill materials will be remediated during the Stage 2 works. Following validation sampling, a geotextile layer was placed over the walls and base of the excavated area, the extent of the geotextile marker layer is presented **in Figure 4a, Appendix A** (adapted from Senversa, 2024h). The area was then backfilled with imported VENM and validated materials from SP059 and SP013. Overall conclusions Senversa (2024k) concluded that: – Validation was conducted in general accordance with the RWP and VWP – The northern portion and northern extent of the pedestrian link (i.e. the Pedestrian Link Audit Area) are suitable for use as a pedestrian link as per the concept design plans in the DA, provided that a passive LTEMP is developed to notify future intrusive construction workers of the presence of asbestos below the geotextile marker layer. – The southern portion of the pedestrian link was concluded to be suitable for mixed high-density residential and commercial land use (as well as for use as a pedestrian link).	The auditor noted that Jeffman's intention is to dedicate the Pedestrian Link to City of Sydney Council. The location of the northern portion of the pedestrian link (PL) is fixed. The proposed route of the southern portion of the pedestrian link is presently unknown. The presence of asbestos (albeit at >2m bgl) within the northern portion of the PL warrants management via a passive management plan which will be attached to the relevant Site Audit Statement. The purpose of the management plan is to notify future maintenance/construction workers of the presence of asbestos at depth. Normal use of the area – as a pedestrian link or surface maintenance – would not warrant any actions to mitigate exposure to the asbestos.
Stage 1 Remediation Validation: Remediation Excavation RA11 and substation footprint (Senversa, 2024l)	The purpose of the letter was to present validation results for: – RA11 excavation, and	The site features discussed in the following text are presented within **Figure 3, Appendix A** (adapted from Senversa, 2024h). Senversa (2024l) reported the validation results of RA11 and the substation together as the northwestern wall of RA11	RA11 validation results The general lithology encountered during RA11 excavations and the substation exclusion zone vacuum excavations was:	The auditor supported the Senversa (2024l) conclusions regarding the RA11 validation, i.e. that remediation and validation of RA11 was generally conducted in accordance with RWP and

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Report	Objective	Scope of works	Findings	Auditor commentary
	– The substation area (including the substation footprint and exclusion zone)	forms the south-eastern boundary of the substation exclusion zone. Although data relating to the substation is presented within the Senversa, 2024l <u>RA11</u> RA11 was remediated owing to the presence of PAH and TRH concentrations in soils, and visual observations of aesthetic impacts (e.g. slag, black staining and hydrocarbon odours) reported during previous investigation works. Senversa reported that RA11 was excavated to greater extents than presented within the RWP and to a depth of 1m-1.3m bgl (to top of Botany Sands). RA11 validation sampling included sampling and analysis of 35 wall samples and eight excavation base samples. Validation samples were analysed for TRH, PAH, asbestos and VOCs with some samples analysed for PCBs. <u>Substation</u> The 'substation' is an active Ausgrid facility. The Senversa RWP and VWP assumed that the substation would be relocated during demolitions or remediation stages, however, Senversa reported that under the instruction of Jeffman, the substation is to remain in-situ and was in use at the time of validation reporting. Due to safety constraints imposed by Ausgrid, the area immediately surrounding the substation could not be investigated and sampled. <u>Substation exclusion zone</u> The 'substation exclusion zone' is a 3m buffer zone around the substation where limited sampling (using 'non-destructive' vacuum excavation techniques) only was permitted. Seven narrow diameter vacuum excavated holes were excavated to a depth of 1.6m bgl (all boreholes were terminated within a layer logged as natural sand (assumed Botany Sands). In addition, a trench was excavated along the eastern extent of the exclusion zone to facilitate subsurface observations and collections of three additional sets of samples. Samples were collected at regular intervals through the soil profile (0.2m, 0.5m, 1.5m bgl). In total, 30 samples were collected and analysed in this area. Senversa reported that asbestos analysis was conducted using 50gram samples given the limited volume of spoil collected from the vacuum excavation pits.	– 0.2m thick concrete slab overlying several fill layers up to 1.1m thickness (generally comprising a silty sand/gravelly silty sand with some brick and concrete inclusions) overlying natural Botany Sands. – 35 PID samples were collected coinciding with all base and wall samples. Two PID results reported VOCs at 8.9ppm and 7.3ppm at depths of 1m and 0.5m respectively within a single validation location (RA11_W3). Average PID results for RA11 was 0.9ppm. – Soil samples reported several exceedances of ecological criteria for a residential setting for copper (5 samples from 3 locations) – results ranged between 300mg/kg to 1,000mg/kg (residential criteria is 230mg/kg). – PCBs were above HIL B in one validation base sample (recorded concentration was 2.6mg/kg, criteria is 1mg/kg). Senversa considered this exceedance to be anomalous given that no other base samples reported PCBs above laboratory LOR. – Benzo(a)pyrene (exceeding ecological screening levels and site specific RBSLs), benzo(a)pyrene TEQ and Sum of PAHs (exceeding HILs B) were reported within a single sample collected from the western wall at 1m bgl. – TRH fraction (C16-C34) exceeded relevant ecological screening levels at two locations at three sample depths. All exceedances were reported within samples collected from the western wall of RA11. One of these samples also exceeded the relevant TRH management limit. <u>Substation exclusion zone validation results</u> Vacuum excavation logs indicated the substation exclusion zone lithology generally comprised: a thin layer of mulch, overlying two to three fill layers (of around 1.5m thickness) beneath which were the Botany Sands. The fill layers generally comprised silty sands with some anthropogenic fill materials (e.g. brick and glass fragments. No odours or staining were recorded on field logs. PID results collected for each layer were generally less than 1ppm (maximum of 1.5ppm). A single sample reported lead concentrations above human health criterion (for a high density residential setting) (SS03, 1,500mg/kg). Statistical calculations however conducted by Senversa indicated that the 95% UCL for lead in the exclusion zone was 380mg/kg (below the adopted health criteria). Several exceedances of adopted ecological criteria for an urban residential setting were reported for copper (three sample locations), lead (one sample) and zinc (two sample locations). All exceedances were detected in either the 1m bgl or 1.5m bgl samples. No other analytes exceeded the relevant criteria. Bonded asbestos was not reported above the health screening levels in a single sample collected from W15 (1m bgl) (located on the eastern boundary of the substation exclusion zone). Senversa concluded that the results collected supported that the remediation objectives had been met to the extent practicable.	VWP requirements and that remediation objectives were generally met to the extent practicable (noting that extending soil removal to the north-west of RA11 could not be safety implemented given the sub-station exclusion zone).

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10.2 Validation outside the remediation areas

Senversa presented several reports relating to the validation of areas of Stage 1 located outside the identified remediation areas (RA). The objectives, scope of works, findings and auditor commentary associated with each of these reports is presented in **Table 14**:

Table 14 Summary of validation outside of remediation areas

Report	Objective	Scope of works	Findings	Auditor commentary
Validation of soils remaining in-situ outside RWP remediation areas – Stage 1 (Senversa, 2024h)	Summarise the remediation actions and document soil validation results for portions of the Stage 1 site located outside the identified remediation areas pedestrian link and substation.	The site features discussed in the following text are presented within **Figure 5, Appendix A** (adapted from Senversa, 2024h). Senversa report that the RAP, RWP and VWP did not identify remediation beyond the identified RAs, the pedestrian link and the substation – and that the works outside these areas was limited to removal of concrete slabs, additional asbestos assessment and removal of asbestos contaminated fill materials. A summary is presented below: Senversa (2024h) reported that the concrete slab removal works generally comprised: – Progressive removal of concrete slabs and inspection for adhered ACM of the underlying 0.4-0.5m of fill materials followed by excavation. These fill materials were initially segregated based on visual assessment for ACM presence. ACM impacted materials were reportedly segregated for off-site disposal. – During validation test pitting, some impacted soils or remnant infrastructure was unexpectedly encountered and Senversa reported that some minor remedial excavations were conducted as follows: • Grease trap in parcel 1 – located between concrete slabs at around 0.4-1.2m bgl in Parcel 1. The contents of the grease trap were removed using vacuum truck. The trap was excavated and the walls and base of the excavation were subject to validation sampling. No exceedances of adopted validation criteria were reported. <u>Retained road</u> – The east-west orientated roadway has been retained at the site – this is a deviation from the VWP and RWP. During excavation works within areas located immediately to the north and south of the retained road, the perimeter walls of the road were exposed and inspected and sampled. Senversa sampled the northern and southern boundary excavation walls as well as conducting some asbestos quantification at five locations along the northern wall. At least four areas were sampled along the southern wall. Four test pits were also excavated through the road. Around 14 500mL soil samples were analysed for asbestos (%w/w) from the aforementioned testing locations – no asbestos was detected in any of the samples analysed. <u>Root zone of retained trees</u> – Senversa report that around 18 trees are to be retained along the western and northern boundaries of Stage 1 (as per DA conditions). Following arborist advice, Senversa (2024h) were advised that samples proximal to the trees could be collected via hand tool sampling methods only. Other arborist advice was that a portion of concrete slab was to be retained within the north-western corner of the site, as the trees in this area reportedly required the slab for support, and removal of the slab could lead to instability. – Thiry four hand augured sampling locations were conducted within the vicinity of the trees and 34 samples were analysed for contaminants of potential concern (CoPC). <u>Part Parcel 4</u> – Soil analytical data for this area was collected from 14 testing locations. Asbestos quantification was conducted on samples collected at eight of these testing locations.	<u>Retained road</u> – PID results collected from retained road excavations ranged between 0.0 and 4.0ppm. – Minor exceedance of revised RBSLs for TCE were reported in soils collected from NDW04, however, two step out testing locations (east and west of the exceedance) did not report TCE above RBSLs. – ACM was not observed during field work nor identified by the laboratory in analysed samples. Senversa however noted that ACM had been previously encountered beneath concrete slabs to the north of the retained road and therefore the presence of ACM beneath the retained road 'cannot be precluded'. <u>Grease trap</u> – Grease trap in parcel 1 – located between concrete slabs at around 0.4-1.2m bgl in Parcel 1. The contents of the grease trap were removed using vac truck. The trap was excavated and the walls and base of the excavation were sampled. No exceedances of adopted validation criteria were reported. <u>Tree protection zone</u> – PID results ranged from 0.0 to 0.3ppm – Hand auger drilling did not penetrate the full depth of fill in the retained trees area, however, Senversa reported that some historical testing locations in the area indicated deeper fill and the presence of a concrete slab in some areas of the tree protection zone. – Soil samples collected from the tree protection zone did not report exceedances of adopted human health criteria. One sample (SB019/0.9-1.0) reported TRH >C16-C34 above the relevant ecological screening level. Asbestos was not observed or detected by the laboratory in any of the analysed samples. – Senversa noted that the retained slab (north-west corner of site) and use of hand auger sampling techniques meant that the contamination assessment in this area was limited. However, Senversa did note that the uncertainty has been mitigated by restrictions on future use and intrusive works within the tree protection zone (as per concept DA approval) and no human health exceedances were reported in the 20 samples analysed from the tree protection area. <u>Parcel 1 soil summary</u> – Senversa reported that data from more than 50 sampling locations at Stage 1 beyond the remediation areas provided sufficient information on post remediation site conditions. Senversa reported that the following exceedances of adopted assessment criteria were identified in situ within Stage 1: • TCE (above site specific RBSLs) – NRW-04 (step out testing indicated no further exceedances) • TRH (>C16-C134) (above ecological screening levels) within SB019. <u>Retained road</u> – Senversa reported that exceedances within site soils included: • B(a)P (TEQ) (exceeding HIL B in EXTP14-W3 • >C16-C34 (exceeding EIL in EXTP14-W3 • Arsenic (exceeding EIL in SRW-04) • Zinc (exceeding EIL in SRW-04)	<u>Retained</u> Road The retained road is around 85m long by 6.5m wide (around 0.05ha). The auditor noted that Senversa analysed 20 soil samples collected from 16 sampling locations within and immediately adjacent to the retained road. Senversa testing location logs indicate that fill materials (which in some instances had recorded evidence of brick, plastic, metal and terracotta – potentially indicative of demolition type rubble) had been encountered to a depth of around 2 bgl in the western portion of the road and <0.5m bgl in the eastern portion. However, it was noted that this ACM was reportedly present as single, isolated fragments in a 'good-fair' condition distributed sporadically rather than present in significant volumes or in clusters. Senversa considered the likelihood of the presence of asbestos to be encountered beneath the retained road to be low and acceptable. <u>Tree protection zone</u> The auditor noted that test pitting is the preferred approach for asbestos observations and testing, however, acknowledged that arborist advice who recommended to Senversa that protecting tree root zones, and therefore test pitting could not be conducted immediately adjacent to trees. Furthermore, the auditor noted that a concrete slab had to be maintained within the north-west corner of the site to act as a cantilever to the tree roots. The auditor noted that the trees are protected and arborist advice indicated that removal of the slab may result in damage to the trees. The auditor acknowledged that while there is some potential for contaminants of concern (including asbestos) to be located in the tree protection zones (including beneath retained slabs within the north-western corner of the site), the risk of contamination being encountered in the future is mitigated by the sampling and analysis that could be achieved by Senversa and because these areas are unlikely to be disturbed during future development.

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Report	Objective	Scope of works	Findings	Auditor commentary
		Part Park – The western extent of the proposed park is located inside the Stage 1 boundary. The majority of this portion of the proposed park was excavated and validated as part of the RA2 remediation works. A small portion of the Stage 1 portion of the park (around 20m^2) was not excavated as part of the RA2 remediation, however, Senversa (2024h) reported that one location (SV10) was sampled in this area.	Part Parcel 4 – Senversa reported the following exceedances in this area: • VTP64 – concentrations of copper and zinc above EIL • B(a)P (TEQ) (exceeding HIL B in EXTP69_W2_0.7) • TRH >C16-C34 (exceeding ESL in EXTP69_W2_0.7). Part Park – Fill was observed to 5m bgl, samples were collected and analysed for CoPC. No exceedances of adopted validation criteria were reported.	

10.3 Groundwater validation

Senversa prepared a groundwater monitoring report (2024g) that focused on RA2, given there was no groundwater contamination identified across Stage 1. The objectives, scope of works, findings and auditor commentary associated with each of these reports is presented in **Table 15.**

Table 15 Summary of groundwater validation reports

Report	Objective	Scope of works	Findings	Auditor commentary
Groundwater Validation report: VCH migration control and post-remediation Verification (Senversa, 2024g)	Present results and validation outcomes of the groundwater assessment required by the VWP	Senversa (2024g) reported that RA2 required remediation of VCH contamination in soil, groundwater and soil vapour. Joint grouted sheet pile walling was installed around the RA2 footprint and a groundwater extraction and treatment system was used to remove water from the remediation area and to prevent the migration of VCH contamination from the source site to the east. Treated groundwater was reportedly disposed to trade waste. Following the removal of contaminated soils from RA2 (including validation sampling from base and walls), RA2 was backfilled with imported VENM/treated and validated site won soils. Subsequent to the backfill of RA2, six groundwater monitoring wells were installed within the footprint of the remediated area to a depth that reportedly coincided with the base of the backfilled materials/top of natural clays. The first of two groundwater monitoring events occurred around four weeks later. The second event occurred around 2 weeks after the first. The groundwater sampling event also included collection of samples from seven wells that are located proximal to but outside RA2. In accordance with the VWP groundwater samples were analysed for VCHs and analytical results were compared to risk based screening levels (RBSLs).	Groundwater levels Senversa (2024g) reported that average groundwater elevation recorded within the six wells located within the RA2 footprint was 26.5m AHD compared to an average of 25.8m AHD reported within the Senversa DSI (2021b). This was a larger fluctuation than previously recorded seasonal variations. Senversa stated that *while higher water levels have been recorded over the validation period, they are considered a temporary artefact of the hard stand removal and significant rainfall during validation that will abate to ambient conditions at the developed site'.* Senversa noted that the most recent groundwater monitoring round (August, 2024) appeared to show a decrease in groundwater level in some areas of Stage 1 and on this basis, Senversa asserted that the conclusions of the HHRA remained relevant, i.e. that an intrusive worker within a trench would not have ongoing regular contact with site groundwater. Senversa (2024g) reported that groundwater level monitoring inferred that the regional flow pattern around the site within the Botany Sands Aquifer remains broadly similar to the pre-remediation patterns, noting a slight groundwater 'mounding' centred around the former dry cleaning facility located on Stage 2 and to the east (within Stage 2) of the RA2 sheet pile wall. Groundwater Field parameters – Average pH results indicated approximately neutral groundwater – Average electrical conductivity indicated predominantly freshwater conditions – Oxidation reduction readings indicated slightly reducing to oxidising conditions – Average dissolved oxygen indicated generally poorly oxygenated conditions – Average groundwater temperatures were reportedly within the seasonal range Groundwater laboratory results – Senversa reported that 'total significant contaminants' were not detected at concentrations exceeding the Management Order Criterion of 500ug/L. – VCH concentrations (i.e. PCE, TCE, cis-1,2-DCE and VC) were reported at concentrations below the revised RBSLs. – Senversa reported a substantial groundwater quality improvement based on results of groundwater testing completed during the DSI in comparison to most recent data collected. Senversa also noted that whilst there are some recorded deviations local to the extraction wells and the sheet pile system, the flow pattern remains broadly similar to pre-remediation conditions. – Senversa concluded that the post remediation groundwater validation has been conducted adequately and consistent with requirements in the VWP. Senversa also reported that remediation objectives have been achieved because VCH concentrations within Stage 1 groundwater were reduced to 'low and acceptable levels' and that VCH migration from Stage 2 to into Stage 1 is being controlled so that risks are also considered low and acceptable despite some monitoring wells in Stage 2 reporting exceedances of Management Order criteria. – Senversa noted that the direct contact pathway for groundwater exposure was not relevant to the site as groundwater is not extracted at the site or surrounding land and the depth to groundwater precluded ongoing regular contact with intrusive maintenance workers.	The auditor noted that groundwater levels were slightly shallower compared to pre-remediation levels, but supports Senversa's conclusions that this may be related to above average rainfall conditions and removal of hard standing. The auditor also noted that to prevent contaminated groundwater in Stage 2 impacting the remediated Stage 1 area, a sheet pile wall (installed into residual clays and weathered bedrock) remains in place and groundwater extraction is occurring on the eastern side of the sheet pile wall. Senversa has reported that during the excavation of RA2, the internal wall of the sheet pile wall (i.e., the down hydraulic gradient side) was inspected with no visual seepage noted supporting the effectiveness of the sheet pile wall to prevent migration of contaminated groundwater from Stage 2..

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10.4 Vapour validation

Senversa (2024f and 2024aq) presented remediation related validation results. The objectives, scope of works, findings and auditor commentary associated with each of the reports is presented in Table 16.

Table 16 Summary of vapour validation reports

Report	Objective	Scope of works	Findings	Auditor commentary
Stage 1 Remediation – RA1 Vapour Assessment, Jeffman, Waterloo (Senversa, 20224f)	Assess the potential vapour risk post site woks/remediation in RA1 via comparison of results to revised RBSLs.	The RAP (Senversa, 2021a) identified elevated soil vapour concentrations in RA1. This assessment included comparison of vapour results to the original RBSLs and concluded that although some soil vapour concentrations were elevated it was not considered to present an unacceptable risk under the original concept design. More recently, Senversa was requested (by Jeffman) to assess the majority of the site for suitability for mixed high density residential/commercial land use – this request prompted the original RBSLs to be revised. The RA1 vapour data was then compared to the revised RBSLs which indicated that there were some locations within RA1 which exceeded the revised RBSLs prompting additional vapor investigations. The investigations included: – Soil vapour sampling on an approximate 10m grid across the area where previous soil vapour exceedances had been identified (vapour pins were installed using hand augers to a maximum depth of around 0.5m bgl). – Summa cannisters were used to collect samples from the vapour pins, and samples were analysed for the 'TO-15' suite of VHCs (which included analysis of the 'significant contaminants'). – Comparison of vapour results to revised RBSLs.	Field parameter results Methane, carbon monoxide and hydrogen sulphide were not detected. PID results ranged from 0.1 to 0.3ppm. Analytical results Senversa reported that VHCs were not reported above the revised RBSLs, although PCE, TCE and cis-1,2 DCE were detected above the laboratory limit of reporting in several instances. Senversa concluded that vapour samples collected from RA1 following the remediation reported low and acceptable concentrations (with respect to vapour intrusion risk) of VHCs (below revised RBSLs).	The auditor supported Senversa's conclusions that vapour data collected from RA1 and compared to the revised RBSLs indicates that this area is unlikely to represent a vapour intrusion risk to future receptors within buildings.
Stage 1 remediation – RA2 Vapour Verification Assessment (Senversa, 2024aq)	Provide the post site works/remediation vapour verification results required by the VWP through comparison to the updated RBSL for RA2 and the area to the west of RA2.	RA2 was remediated as per the description presented within the first row of Table 13. Area to the west of RA2 – background Senversa reported that the area to the west of RA2 was investigated as follows: – Test pitting was carried out to the north and west of RA2 to assess fill materials with some of the test pits targeting isolated residual VCH impacts reported within the RA2 wall. Additional soil samples were collected from soil vapor bores. – One test pit (VTP65) reported TCE concentrations above the revised RBSL at a depth of 0.5-0.6m bgl, however, samples collected from above and below did not report TCE above RBSLs. A 10m2 area around VTP65 was excavated to 1m bgl, with subsequent validation samples from the base and walls not recording TCE above RBSLs. – Test pit VTP69 reported benzo(a)pyrene and TRH C16-C34 above adopted HIL-B at 0.7-0.8m bgl. A 10m2 area around VTP69 was excavated to a depth of circa 1m bgl. Validation samples from the base and walls of VTP69 reported some additional, minor, exceedances of adopted assessment criteria for hydrocarbons. Senversa stated it would consider the VTP69 minor wall exceedances holistically with the broader dataset for the site. Vapour validation – RA2 and west of RA2 – Senversa reported that 11 soil vapour probes were installed across RA2 and the area to the west of RA2. Two rounds of vapour sampling were completed. – Vapour probes were installed using hand augers to around 0.5m bgl (SV011 was installed to 1.5m bgl). – Shroud testing was conducted to identify potential leaks. Samples were collected using a Summa canister and analysed for select TO-15 suite of VHCs (which included the significant contaminants)	Vapour results Field equipment did not detect methane, carbon monoxide or hydrogen sulphide at any of the testing locations. Oxygen readings ranged between 0 and 21.1%. Carbon dioxide readings ranged between 0 and 9.5% while PID readings ranged between 0.0 and 1.5ppm. Analytical results **Round 1** Senversa reported that all concentrations of VCHs were below the revised RBSLs with one exception at SV010. TCE was recorded at SV010 at 7.73mg/m^3 – above the revised RBSL for slab on grade (3mg/m^3) and basement scenario (6.2mg/m^3). Several other vapour samples reported VCHs above the laboratory LOR, but not above revised RBSLs. **Round 2** Senversa reported that all concentrations of VCHs were below the revised RBSLs at all monitoring locations. Some VHC compounds were reported above laboratory LOR at the majority of testing locations but none were reported above revised RBSLs. Additional monitoring at SV012 and SV013 only Two additional soil vapour probes were installed proximal to SV010. Senversa reported that all concentrations of VCHs were below the revised RBSLs at both testing locations. Some VHC compounds were reported above laboratory LOR, but below revised RBSLs in samples collected from both testing locations. Follow-up sampling SV010, SV012 and SV013 were all re-sampled. Senversa reported that all concentrations of VCHs were below the revised RBSLs in samples collected from all three monitoring locations. Concentrations of PCE, TCE and cis-1,2 DCE were detected above LOR, but below revised RBSLs in the samples collected from all three locations. Senversa conclusions Senversa reported that the concentrations of VCHs in soil vapour in the RA2 area were below the updated RBSLs for a slab on grade building, adjacent to a building with a basement, and, open space scenarios. Senversa concluded that, *'vapour intrusion risk at RA2 from soil vapour concentration is considered low and acceptable'.*	The auditor noted that an elevated TCE concentration was reported within a single vapour monitoring location to the west of RA2, however, the auditor was satisfied that sufficient additional lines of evidence (in the form of additional monitoring and sampling and comparison to revised RBSLs) supported the Senversa conclusion that the overall vapour intrusion risk at RA2 from soil vapour to future receptors within a mixed use commercial/medium-high density residential is likely low and acceptable.

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10.5 Final site validation

Senversa issued a Final Site Validation report (Senversa, 2024g), of which a summary of the objectives, scope and findings is presented in **Table 17.** The Final Site Validation comprised the key elements of the individual remediation area reports, data collected outside the remediation areas and soil vapour groundwater monitoring data.

Table 17 Summary of final site validation report

Objective/s	Scope of works	Findings
Senversa (2024i) report that the final validation report objectives were to report, consolidate and summarise the remediation and validation efforts and to demonstrate that the remedial objectives described in the RAP have been achieved such that Stage 1 of the site is suitable for the proposed land use. To demonstrate compliance with contaminated land guidelines and applicable regulatory requirements and to demonstrate that the requirements of the RWP and the VWP have been met.	The final validation report includes: – A review of interim validation reports – A summary of the remediation and validation approach, including any deviations from the RAP and RWP – A review of materials management – A quality assurance and quality control assessment – Updated conceptual site model – Summarise remediation and validation outcomes. The Senversa (2024i) report summarises the findings in terms of 'audit areas' as follows: – The 'Pedestrian Link Audit Area' (i.e. the northern portion and northern extent of the pedestrian link – required to be suitable for use as a pedestrian walkway i.e. commercial/industrial use. – The 'Recreation Audit Area' (i.e. the portion of the proposed park that is located within Stage 1 – required to be suitable for use as a publicly accessible park area) – The 'Substation Audit Area' (i.e. the substation and the 3m exclusion zone surrounding the substation). – The 'Main Audit Area' (i.e. the remaining portions of Stage 1 – required to be suitable for mixed use commercial and medium-high density residential). The audit areas are presented in **Appendix D.** The Remediation Areas (RA) referenced in the following text are presented within **Figure 3a** and **Figure 3b**, Appendix A (adapted from Senversa, 2024h). The Senversa (2024i) report presents a consolidation of all the iterative remediation validation reports (previously summarised within **Section 9** and **Section 10** of this SAR. Although previously summarised in previous sections of this report, for completeness, the remedial activities included within the Senversa (2024i) are summarised below: **Main Audit Area** RA7 – Removal of concrete slab – Remove UST and contents of UST – Excavation of impacted fill – Off-site disposal of some fill – Collection of validation samples from base and walls – Backfill of RA7 excavation with approved site won material and imported VENM Former RA1 Based on the client requested update to final land use (as summarised in **Section 2**), Senversa compared historical RA1 vapour data to revised RBSLs. Following this comparison, Senversa determined that additional vapour assessment was required to assess RA1 and so additional vapour probes were installed and sampled. RA12 – Removal of concrete slab – Excavation of impacted fill – Off-site disposal of some fill – Collection of validation samples from base and walls – Backfill of RA12 excavation with approved site won material and imported VENM Parcel 1 (located West of RA7) – Removal of two concrete slabs – Excavation and segregation of fill – Off-site disposal of some fill to a licensed landfill facility – Validation sampling of base and walls of excavation – Reinstatement with approved site won material Tree protection zone (located within Parcel 1) (refer to Figure 5, Appendix A) – Soil sampling using hand augers within the root zone at a rate of two samples per retained trees to a maximum depth of 0.5m bgl. – Fill soils could not be removed from tree protection zones	The findings of the Stage 1 Remediation Validation work have been reported iteratively within the reports summarised within **Section 10.1 to Section 10.4910** of this SAR. The Senversa (2024i) report presents a holistic summary of all validation data, a summary of the Senversa (2024i) findings are presented below: **Main Audit Area** RA7 and RA12 – UST and associated piping removed and disposed to a metal recycling facility – Validation samples collected from base and walls of RA7 and RA12 met validation criteria. Former RA1 The assessment concluded that analytical results for soil vapour were below the adopted RBSLs and vapour risk at the former RA1 was considered low and acceptable for slab on grade medium-high density residential land use and basement construction. Parcel 1 (located West of RA7) – RA11 (located within Main Audit Area) • Validation samples reported several CoPC that exceeded human health and ecological criteria generally relating to copper, hydrocarbons and PCB. Senversa completed a statistical assessment which indicated that the exceedances represented an acceptable risk. Senversa reported that the risk to ecological receptors was likely to be low, however, the soils for RA11 may not be suitable for use as growing media. – Tree protection zone • Senversa reported no exceedances of the adopted validation criteria. Retained Road (between Parcel 1 and Parcel 4) – Senversa reported that ACM was not observed in excavated faces (northern and southern boundary of road area) – Ecological exceedances were recorded for zinc and arsenic; Senversa considered these exceedances to be isolated and potentially related to metal fragment inclusions rather than widespread contamination. RA2 – Several exceedances of adopted PID validation criteria and ecological criteria were recorded, however, Senversa concluded that, overall, soil validation results met the adopted validation criteria. – Senversa reported that vapour intrusion risk at RA2 was low and acceptable. Groundwater – Senversa reported that validation sampling of groundwater has concluded that remediation in Stage 1 has achieved the remediation objectives set out in the RAP. Senversa reported that VCH concentrations were low and acceptable subject to ongoing implementation of the RAP and monitoring and groundwater control in Stage 2 as required by the Management Order. Soil Vapour – Senversa reported that vapour intrusion risk was low and acceptable for slab on grade medium-high density residential or for less conservative uses e.g. commercial/industrial or medium-high density land use with basement) Asbestos clearance – Senversa reported that following the completion of remediation at Stage 1, the site was inspected for the presence of ACM, eleven fragments were found during the initial clearance and no fragments were reported following a second surface clearance inspection. Statistical assessment and overall conclusions: Main Audit Area Senversa reported that over 400 soil samples had been collected and analysed for metals, TRH and PAH within the Main Audit Area, and more than 700 samples were collected and analysed for VCHs. Furthermore, groundwater, soil vapour (stockpile and in-situ sampling), and stockpile leachability sampling and analysis was conducted to provide further lines of evidence in relation to vapour presence and/or migration. Several exceedances of human health and ecological criteria were reported within soils in the Main Audit Area – generally applying to some heavy metal analytes, some TRH fractions, PAHs, VCHs and PCBs however, statistical analysis of the sampling results (primarily the calculation of

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Objective/s	Scope of works	Findings
	– Imported mulch was placed at the base of the trees Retained road area – Some areas excavated because of hydrocarbon impacted soils identified during validation test pitting – Validation sampling of northern and southern faces of exposed road edges. Parcel 4 (outside RA2 footprint) – Removal of two concrete slabs and fill between slabs – Excavation and segregation of asbestos impacted materials – Some areas excavated because of VCH and hydrocarbon impacted soils identified during validation test pitting – Off-site disposal of some fill to a licensed landfill facility – Validation sampling and analysis from base and walls of excavation – Senversa reported that the retention of the pavement in this area prevented validation in accordance with the VWP, however, the area was assessed the area by reviewing historical data from the area (11 sampling locations) supplemented with ACM field quantification along northern and southern perimeter excavation faces at 10m linear sampling intervals and four soil samples collected per wall for chemical analysis. **Main Audit Area/Recreation Audit Area** RA2 (the eastern extent of RA2 forms the Recreational Audit Area) – Sheet pile walls installed around perimeter – Dewatered – Removal of concrete slabs – Excavation and segregation of asbestos fill – Excavation and treatment of VCH impacted soils – Progressive sampling and analysis of base and walls during excavations – Backfill of RA2 excavation with approved site won material and imported VENM – Removal of sheet pile walls from western, northern and southern perimeter. Eastern sheet wall remains in place. The majority of the Recreational Audit Area is located within the eastern extent of the RA2 excavation. The northernmost portion of the Recreational Audit Area was located outside the RA2 excavation. The portion that was excavated was reportedly excavated to a depth of 3.0m bgl. **Pedestrian Link Audit Area** Pedestrian Link (the northern portion and northern extent of the pedestrian link form the Pedestrian Link Audit Area) The RAP did not consider that the Pedestrian Link Audit Area would require remediation, however during slab removal works in this are fill was observed to impacted by ACM. Soils were tested for heavy metals, PAH, and asbestos. VCHs were not considered to be contaminants of concern. – Design and installation of shoring system to mitigate adjacent building stability risks – Concrete slab removal – Excavation of asbestos impacted fill – noting some practical limitations due to presence of footings from adjacent structures – Off-site disposal of asbestos waste to landfill – Validation sampling and analysis from base and walls of excavation – Backfill area with imported VENM and quarried material **Substation Audit Area** – No intrusive investigations could be conducted within the fenced substation compound due to safety restrictions. – Vacuum excavation techniques were utilised to collect soil samples from the 3m exclusion area (located within the 'substation audit area, but outside of the fenced substation compound) to a maximum depth of 1.5m bgl. – Soil samples were also collected from a trenched excavation located along the eastern boundary of the substation exclusion zone	the 95% UCL for exceeding analytes) indicated that remedial efforts had been achieved to the extent practicable and that the Main Audit Area is suitable for its proposed use. **Recreation Audit Area** Soils The recreational audit area is intended to be dedicated to Council. Senversa reported that validation samples collected from the base of the excavation (RA2) met the validation criteria. Some ecological criteria exceedances (TRHs in two samples) and a human health exceedance of lead in one sample were reported in the eastern wall of the Recreation Audit Area, but given that these samples were collected from the wall of the Stage 1/Stage 2 boundary, Senversa pointed out that the exceedances were located off-site. One ecological exceedance of TRH fraction > C16-C34 was reported in the southern boundary of the recreational audit area, however the exceedance was from 2m bgl, as per NEPM ecological criteria generally only apply to the upper 2m of the soil profile. The auditor considered too that this was only an isolated occurrence and would not likely affect plant growth given the much larger area where no TRHs were recorded. Groundwater Senversa concluded that the remediation objectives set out in the RAP have been achieved for groundwater within the Recreation Audit Area. Senversa reported that groundwater VCH concentrations have been reduced to low and acceptable levels, and potential VCH migration from the source site in Stage 2 to Stage 1 is being effectively managed. Soil Vapour Senversa reported that vapour intrusion risk was low and acceptable for slab on grade medium-high density residential or for less conservative uses (e.g. commercial/industrial or medium-high density land use with basement) Asbestos clearance Senversa reported that following the completion of remediation at Stage 1, the exposed soils were inspected for the presence of ACM. Eleven fragments were found during the initial clearance, but no fragments were encountered during the second clearance. Statistical assessment and overall conclusions: Recreational Audit Area Senversa reported that 34 validation samples were collected from the base and walls of the recreational audit area, and, five historical sampling locations from this area had also been sampled and analysed. Samples were generally analysed for VCHs, heavy metals, TRHs and some samples were analysed for asbestos. Furthermore, groundwater, soil vapour (stockpile and in-situ sampling), and stockpile leachability sampling and analysis was conducted. Only one ecological exceedance related to TRH >C16-C34 was identified – subsequent statistical analysis through 95% UCL calculation identified that the soils met the site criteria. Senversa concluded that '*no residual contamination requiring management was identified within the Recreational Audit Area'* and that '*the remedial objectives have been met such that the Recreational Audit Area is suitable for it's proposed recreational public open space land use'.* **Pedestrian Link Audit Area** Soils Senversa report that asbestos was identified in fill and was excavated to the lateral and vertical extents possible based on constraints associated with foundations of adjacent buildings. Asbestos in the form of fibrous asbestos and asbestos fines was identified at depths of 1.9m bgl or greater with the exception of one sample collected from approximately one metre in from the eastern boundary. However, Senversa reported that further lateral excavation could not be completed due to the presence of additional building foundations. Senversa reported that once fill soils had been excavated to the maximum practical limits, an orange coloured geotextile was placed over the base and side of the excavation and the area was backfilled with VENM to final ground surface level. Senversa reported that the human health risks associated with residual asbestos in the Pedestrian Link Audit Area can be managed via a passive environmental management plan (EMP). Senversa concluded that the area is suitable for its proposed use as a pedestrian access way. Groundwater and soil vapour Senversa reported that the RAP did not require groundwater or soil vapour remediation or validation within the Pedestrian Link Audit area. Asbestos The Pedestrian Link was re-instated with imported VENM materials to the finished surface level and so asbestos clearance of the site surface was not required. Conclusions Senversa concluded that the Pedestrian Link Audit Area does not present an unacceptable risk to human health or ecological receptors and is suitable for proposed commercial/industrial use subject to implementation of an LTEMP to manage the presence of asbestos that remains beneath the geotextile marker layer.

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Objective/s	Scope of works	Findings
		Substation Audit Area Soils Exceedances of adopted human health and/or ecological commercial/industrial land use criteria were reported for a for copper, zinc, various TRH fractions, benzo(a)pyrene and benzo(a)pyrene TEQ. Groundwater and soil vapour The investigations that informed the RAP (Senversa, 2021a) concluded that VCHs did not exceed adopted groundwater assessment criteria for groundwater and soil vapour and therefore Senversa did not conduct further groundwater or soil vapour assessment within the Substation Audit Area. Asbestos Bonded asbestos fragments (bonded ACM) were detected in one of 19 samples analysed, but below adopted validation criteria. Statistical assessment and overall conclusions: Substation Audit Area Senversa calculated 95% UCLs for the soil results that exceeded adopted assessment criteria and stated that overall, the risk to human health and ecological receptors to commercial/industrial receptors was low and acceptable. Senversa reported that if the Substation Audit Area were to be used for a more sensitive land use e.g. medium to high density residential, then further assessment and management would be required.

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10.6 Auditor discussion: Validation

The auditor considered that Senversa collected sufficient data to demonstrate that remediation of Stage 1 had been completed in general accordance with the RAP (Senversa, 2021a) and the RWP (Senversa, 2023b). Deviations from the planned remediation have been clearly documented and generally related to:

- practical limitations preventing remediation, for example, the RA11 excavation being limited by the presence of the substation exclusion zone,
- the northern and eastern extents of Parcel 1 remediation being limited by the presence of the tree protection zone and
- portions of the Pedestrian Link Audit Area excavation being limited by the presence of sub-surface building footings.

The auditor noted that where exceedances of human health or ecological exceedances were identified within on-site soils, Senversa conducted statistical assessments of the data sets (using NEPM recommended methods) which have concluded that the risks are low and acceptable to the specified future users of each portion of the site. In the case of the Pedestrian Link Audit Area, where asbestos is located in soils at depth, the human health risk is being managed by implementation of a long term environmental management plan (LTEMP).

The auditor noted that a deviation to the RAP and RWP was that an east-west orientated trafficable roadway has been retained at the site. The retention of the road was requested by Jeffman and has been retained to provide access to the Stage 2 area (given the safety constraints in accessing Stage 2 from Bourke Street). The auditor noted that Senversa has presented several lines of evidence (including visual inspections and sampling of the northern and southern walls of the road) to support that the likelihood of encountering asbestos below the retained road is low, but acknowledged the potential for some asbestos to be encountered during future works in this area. In this regard the auditor noted that in all likelihood, the amount of asbestos that could be present would be at concentrations less than the relevant NEPM criterion for residential with minimal access to soils. If asbestos was identified soil in this area following removal of the concrete roadway and it needed to be disposed off-site, it would need to be characterised as per relevant NSW EPA waste disposal guidelines with subsequent disposal to an appropriately licenced facility.

The auditor also noted that should the substation audit area be developed for a more sensitive land use (i.e. for medium to high density residential land use) then further investigations and or/management would be required.

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11. Post remediation - Conceptual site model

Senversa (2024i) presented a post remediation conceptual site model, a summary is presented in **Table 18** below. The Audit Areas referenced in **Table 18** are presented in **Appendix D.**

Table 18 Summary of post remediation conceptual site model

Audit area	Receptor	Pathway	Discussion
'Main audit area'	Future residents and commercial workers living/working within future building structures within the main audit area	Inhalation of VCHs via by residents and commercial workers within future buildings and basements from: – Shallow ground water seepage into future basements – Leaching from soil to groundwater and then seepage into future basements	Senversa (2024i) reported that the remediation conducted within Stage 1 has reduced VCH concentrations in groundwater to low and acceptable levels. Furthermore, a Water NSW Order that is applicable to the area that the site resides (i.e. within the mapped Botany Sands Aquifer restriction area) states that basements constructed within the area must be tanked and watertight for the anticipated life of the building. With regards to the VCH impacted groundwater that remains in Stage 2, Senversa reported that the groundwater retention system appears to be working effectively with no groundwater seepage observed during the RA2 excavations. Vapour intrusion risk was found to be low and acceptable for the most conservative potential land use i.e. slab on grade medium to high density residential or for less sensitive uses e.g. commercial/industrial land use/ medium to high density residential (including basement) land use.
		Direct contact and/or dust inhalation/ingestion with residual contaminated soils	Senversa (2024i) report that this exposure pathway is limited on the basis that development plans indicate that the area will be mostly covered by buildings or pavement with minimal landscaping areas. Furthermore, Senversa (2024i) report that statistical analysis of residual soil contaminants and asbestos quantification results from indicate that the main audit area is suitable for mixed use medium-high density residential/commercial industrial end use.
	Intrusive maintenance workers working within a trench	– Inhalation of VCH vapours – Direction contact with residual contaminated soils	Senversa (2024i) reported that soil vapour sampling conducted across Stage 1 reported concentration of VCHs below adopted assessment criteria protective of medium-high density residential land use which is more conservative than the criteria used to screen data to assess risks to intrusive maintenance workers. Senversa concluded there were no unacceptable risks to intrusive maintenance workers working within trenches in the main audit area. With regards to intrusive maintenance workers being exposed to residual contamination within the main audit area, Senversa (2024i) report that soils within the Stage 1 audit area were validated as suitable for medium-high density residential land use (which is more conservative criteria than the criteria used to screen soils data to assess risks to intrusive maintenance workers), on this basis, Senversa reported there were no unacceptable

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Audit area	Receptor	Pathway	Discussion
			risks to intrusive maintenance workers from direct contact of soils and/or inhalation/ingestion of dusts within the main audit area.
	Terrestrial ecological receptors	– Rootzone uptake – Biota uptake	Senversa (2024i) reported that the habitat value of the site is negligible and there are limited environmental values present requiring protection, although it was noted that, following re-development, it is possible that site soils could be used as growing media within minor landscaping areas. Senversa (2024i) report that soils within the main audit area are generally considered suitable for use as growing media.
The 'Recreational Audit Area'	Open space users using the Stage 1 portion of the proposed public park	– VCH inhalation by park users – Direct contact with contaminated soils (including dust ingestion/inhalation)	Senversa (2024i) reported that soil vapour sampling conducted within and proximal to the Stage 1 portion of the public park indicated no unacceptable risks to future recreational or public open space users of the Stage 1 portion of the park. With regards to direct contact/dust exposure, Senversa report that the Stage 1 portion of the park was excavated to a depth of ca 4.5m bgl and backfilled with either imported VENM or site won fill materials which had been validated as suitable for on-site re-use. Based on the aspects, Senversa concluded that there were no unacceptable risks.
	Intrusive maintenance workers	– Direct contact with contaminated soils (including dust ingestion/inhalation) – VCH inhalation by intrusive maintenance workers	Senversa (2024i) reported that soils within the Stage 1 portion of the park area were validated as suitable for recreational/public open space use – being more conservative than the criteria that is protective of intrusive maintenance workers. Therefore, Senversa reported there is no unacceptable risk to future intrusive maintenance workers from direct contact of soils within the Stage 1 park area. With regards to vapour risk to intrusive maintenance workers within the park, Senversa (2024i) reported there were no unacceptable risks to intrusive workers from soil vapour in Stage 1 given that all Stage 1 soil results were below medium-high density residential criteria (which is more conservative criteria than those protective of intrusive maintenance workers)
	Terrestrial ecological receptors	– Rootzone uptake – Biota uptake	Senversa (2024i) reported that the habitat value of the site is negligible and there are limited environmental values present requiring protection, although it was noted that, following re-development, it is possible that site soils could be used as growing media within minor landscaping areas. Senversa (2024i) reported that the Stage 1 portion of the park was backfilled with imported VENM from 2.5m to 1.0m bgl and the upper 1m was backfilled with site won material which had been validated as suitable for recreational/public open space use.
The 'Pedestrian Link Audit Area'	Users (i.e. pedestrian foot traffic) of the pedestrian link	– VCH inhalation by pedestrian link users – Direct contact with contaminated soils (including dust ingestion/inhalation)	Senversa (2024i) report that vapour sampling conducted across Stage 1 indicated that concentrations of VCH were below adopted assessment criteria protective of public open space users indicating no unacceptable risk to pedestrian link users.

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Audit area	Receptor	Pathway	Discussion
			With regards to direct contact/dust exposure, Senversa report that the concept DA indicates that the pedestrian link will mostly be a paved walkway and therefore access to soils is considered to be limited. An EMP will also be implemented which will notify future contractors of the presence
	Intrusive maintenance workers	– Direct contact with contaminated soils (including dust ingestion/inhalation) – VCH inhalation by intrusive maintenance workers	Soils within the pedestrian link audit area were excavated to the extent practicable i.e. to between 0.9 to 2.0m bgl (excavations within the eastern, western and north-eastern extents of the pedestrian link were limited by the presence of adjacent building foundations). Some asbestos (in excess of health screening levels) remains at the base of the excavation in this area. Senversa reported that the base and walls of the excavation were covered with an orange coloured geofabric marker layer, and VENM was placed on top of the marker layer. Senversa reported there is no exposure risk to intrusive workers working above the marker layer. A passive EMP will be required to manage exposure to soils below the marker layer. With regards to vapour risk to intrusive maintenance workers within the pedestrian link, Senversa (2024i) reported no unacceptable risk to intrusive workers from soil vapour at Stage 1 on the basis of all Stage 1 soil results being below medium-high density residential criteria for relevant CoPCs (which is more conservative criteria than those protective of intrusive maintenance workers)
	Terrestrial ecological receptors	– Rootzone uptake – Biota uptake	Senversa (2024i) reported that the pedestrian walkway is of limited ecological value because it will be predominantly utilised as a paved pedestrian walkway. The Pedestrian Link audit area was backfilled with imported VENM the total depth of excavation to the surface.
The 'Substation Audit Area'	Intrusive maintenance workers	– Direct contact and/or dust inhalation/ingestion with residual contaminated soils	The Substation is presently used a fenced, locked substation (no ceiling) area with a sealed concrete floor, as such residents etc are unlikely to come into contact with soils within the majority of this area, furthermore, VCHs were not identified as a contaminant of concern for this portion of the site. Senversa (2024i) report that although some exceedances of human health and ecological criteria exist within the substation exclusion area, statistical assessment shows a low and acceptable risk.
	Terrestrial ecological receptors	– Rootzone uptake – Biota uptake	Senversa (2024i) report that the substation audit area is of limited ecological value as it will either function as a substation or as a sealed roadway.

Table notes

Senversa does not consider that groundwater at Stage 1 represents a plausible source of contamination to on-site or off-site intrusive maintenance workers (based on the 'typical' depth to groundwater at the site and surrounding area nor to off-site drinking water receptors (based on restrictions to abstraction placed on the Botany Sands Aquifer) nor to ecological receptors (based on the distance from the site to nearby receiving water bodies and identified groundwater dependent ecosystems).

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11.1 Auditor discussion – conceptual site model

The auditor considered that the post-remediation CSM was completed in a manner generally consistent with the steps recommended in the ASC NEPM. The auditor noted the information provided within the reports listed in Section 1.6 and Section 1.7 demonstrated that identified S-P-R linkages are generally considered to represent a low and acceptable risk to identified receptors within Stage 1 in the context of the identified future users of each portion of the Audit Area. The RAP acknowledged and the Management Order requires continued operation of the groundwater containment system in Stage 2 to prevent migration of contamination onto Stage 1 until the completion of Stage 2 remediation has been completed.

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12. Long Term Environmental Management Plan: Pedestrian Link Audit Area

The Pedestrian Link Audit Area is intended to be dedicated to Council for future use as a sealed pedestrian walkway (with limited access to soils).

With reference to the summary presented within **Table 17** Senversa has reported that fill within the Pedestrian Link Audit Area was excavated and removed from the lateral and vertical extents possible based on constraints associated with foundations of adjacent buildings. Senversa did however report that some asbestos in the form of fibrous asbestos and asbestos fines was identified and remains in-situ at depths of 1.9m bgl or greater.

Senversa reported that following the excavation of fill to the maximum practical and safe limit, an orange coloured geotextile was placed over the base and side of the excavation and the area was backfilled with VENM to final ground surface level. Senversa stated that health risks associated with asbestos remaining in the Pedestrian Link Audit Area could be managed via a passive Long Term Environmental Management Plan (LTEMP).

The LTEMP has been reviewed by CoS and the auditor. The auditor has reviewed the LTEMP in the context of the relevant NSW EPA guidance pertaining to an LTEMP. The auditor's review is summarised in **Table 19.**

Table 19 Summary of review of Pedestrian Link LTEMP

Requirement	Auditor Commentary
Document status	The report clearly states it is an LTEMP and was reviewed and approved for issue by Mr Jason Clay (Senversa). It was issued as a final on 20 September 2024. The report was commissioned by the site owner Jeff Eisman of Jeffman Pty Ltd.
Title	The report clearly states it is a long term environmental management plan.
Purpose	The stated objective of the Long Term Environmental Management Plan (LTEMP) is to briefly summarise the occurrence of asbestos containing materials (ACM) at the site and to outline the procedures and controls for the management of asbestos during operation of the site as a pedestrian link and during any future intrusive work.
Background	Relevant site background details have been presented within the LTEMP
Description of existing/residual contamination	A summary of the residual contamination including description of the capping material/cap depth etc has been presented within the LTEMP
Management activities	Responsibilities were clearly outlined, including details on how site workers or visitors need to be briefed if the capped area is to be disturbed. Given the LTEMP is passive, no specific management activities were noted, only if the cap is disturbed.
Inspection, maintenance, environmental sampling, analysis and reporting (if applicable)	Section 3.0 of the LTEMP lists the relevant management requirements should the area be disturbed.
Monitor and review of environmental management plan	The LTEMP states that it should be reviewed periodically to ensure it remains fit for purpose.
Communications and notifications	Senversa reported that the LTEMP can be reasonably made legally enforceable pursuant to Section 19 of the Work Health and Safety Act 2011 (NSW) and Chapter 8 of the Work Health Regulation 2017 (NSW) and Chapter 8 of the Work Health and Safety Regulation 2017 (NSW). Under these provisions, a person conducting a business or undertaking (PCBU) must ensure, so far as reasonably practicable, the health and safety of workers and other persons, including in relation to asbestos. A PCBU must also ensure the provision of any information, such as the LTEMP, that is necessary to protect all persons from risks at the site. In NSW, this is regulated and enforced by SafeWork NSW. In addition, this LTEMP is enforceable under the conditions of consent for the development application D/2020/45, which allowed that any land that is to be dedicated to the City as part of the associated Planning Agreement must not be encumbered by any LTEMP other than a passive LTEMP as submitted to and approved by the Site Auditor and Council's Area Planning Manager.

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Requirement	Auditor Commentary
	City of Sydney was issued a copy of the LTEMP on 20 September 2024. In response, Matthew Girwan of CoS requested (in an email dated 23 September 2024) that 'it *will require confirmation from the Site Auditor that they has no concerns with the EMP document and that it will be referenced on their final Site Audit Statement'.* The auditor responded to CoS in an email on 23 September 2024 that: *I can confirm that I have reviewed the EMP and that it has been prepared as per the NSW EPA Consultants reporting on contaminated sites guidelines.* *The EMP is considered passive and there is no need to undertake any form of monitoring.* *The EMP (as per the NSW EPA Guidelines for the NSW Site Auditor Scheme (3rd Edition) will be attached to the SAS to be issued for the pedestrian access link*. In a final correspondence from Council, Council stated, '*The submitted LTEMP is passive in that it sets out actions that must be undertaken if any intrusive ground works are undertaken that breach the installed marker layer below which contaminated soils remain. This LTEMP would not breach Condition 55.* *I note we have email advice from the Site Auditor confirming that this LTEMP is endorsed by him and will be referenced on the final Section A Site Audit Statement which will be required under condition 24'.* Evidence of the noted correspondence with Council is presented in **Appendix E.**

12.1 Auditor discussion: LTEMP – Pedestrian Link Audit Area

The auditor has reviewed the LTEMP and deemed it to be passive and prepared in a manner consistent with NSW EPA requirements. Auditor commentary is presented in Appendix B of this SAR.

The auditor considered that the LTEMP is an appropriate document to record the nature of the contamination in the Pedestrian Link Audit Area. The asbestos contamination has been capped in a manner consistent with standard industry practice and users of the area will not be exposed to asbestos.

The following statements in relation to the requirements of Section 3.4.6 of the Auditor Guidelines are made:

a) The LTEMP has been reviewed by the auditor. Auditor commentary (captured within interim audit advice commentary presented in Appendix B) has been adequately addressed.

b) The auditor agreed that the LTEMP can be made to be legally enforceable under WHS (2017) regulations, and under the conditions of consent for the development application (D/2020/45) – which the auditor considered to be a mechanism of legal enforceability.

c) The land to which the LTEMP applies is intended to be dedicated to City of Sydney Council therefore public notification is not relevant.

d) Email correspondence from CoS have been received which states that the LTEMP is passive and would not breach Condition 55 (as presented in **Appendix E**).

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13. Evaluation of quality assurance and quality control

Senversa has provided various reports for auditor review (as listed in **Section 1.6**). In instances where these reports have presented sampling results a QA/QC compliance assessment has generally been completed. The final validation report (Senversa, 2024i) includes a holistic assessment of the QA/QC result for all samples collected as part of the validation works. The auditor has reviewed the QA/QC assessments summarised within each of the individual reports, evidence of which is presented within interim audit advice letters (presented in **Appendix B**). The QA/QC measures (both field and laboratory), as presented in Senversa (2024i) have been reviewed against applicable requirements of the NSW EPA (2020) *Consultants Reporting on Contaminated Land* guidelines, a summary of which is presented in **Table 20.**

Table 20 Comparison of field and laboratory QA/QC to **NSW EPA (2020)** *Consultant Guidelines*

NSW EPA (2020) criteria	Auditor comment
Field sampling QA/QC assessment	
Details of sampling team	Senversa (2024i) reported that remediation was completed by and under the supervision of experienced field staff
Reference to sampling plan/method, including any deviations from it – sampling and analysis quality plan	Senversa has referenced the sampling plan and other DQIs referenced within the remediation planning documents. Senversa has clearly presented any deviations from the plan.
Decontamination procedures carried out between sampling events	Senversa (2024i) reported that the decontamination methods were consistent with stated procedures.
Logs for each sample collected, including date, time, location (with GPS coordinates if possible), sampler, duplicate samples, chemical analyses to be performed, site observations and weather/environmental (i.e. surroundings) conditions. Include any diagrams, maps, photos.	Field logs have been provided within the various reports submitted for auditor review. Field logs generally included appropriate information for the purposes of the assessment. Climatic information has been presented to support vapour validation assessments. Field records have been provided within report appendices for e.g. groundwater monitoring and vapour monitoring works.
Chain of custody fully identifying – for each sample – the sampler, nature of the sample, collection date, analyses to be performed, sample preservation method, departure time from the site and dispatch courier(s) (where applicable)	Senversa presented all chain of custody forms within the appendices of relevant reports. CoC's present the required information.
Field quality assurance/quality control results (e.g. field blank, rinsate blank, trip blank, laboratory prepared trip spike)	Senversa clearly presented field QA/QC results in tables and provided relevant discussions within various reports, including providing discussion of any non-compliances and the potential impact on the useability of the data set.
Statement of duplicate frequency	Senversa presented a clear statement within the final validation report on the overall duplicate/triplicate frequency for each media type. Soils duplicate/triplicate frequencies were slightly below the planned quantity of 1 duplicate and 1 triplicate per 20 soil samples. The actual frequency achieved was calculated to be 1 in 23 samples, however this still equated to 53 duplicate and 53 triplicate samples having been collected and analysed which the auditor considered to be adequate for the purposes of the QC assessment. Groundwater and soil vapour duplicate and triplicate frequencies were greater than the planned frequency.
Background sample results	NA
Field instrument calibrations (when used)	Senversa has clearly presented equipment calibration bump test and calibration records for a photo ionisation detector and water quality meter.

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NSW EPA (2020) criteria	Auditor comment
Sampling devices and equipment	Senversa presented adequate information with regards to the sampling devices and equipment used. Where required, calibration/bump check records have been presented.
Laboratory analysis QA/QC assessment	
A copy of signed chain-of-custody forms acknowledging receipt date, time and temperature and identity of samples included in shipments	Signed chain of custody forms have been appended to various reports presented to the auditor for review.
Record of holding times and a comparison with method specifications	Senversa reported holding time breaches in the reports presented for auditor review. Where breaches were documented, Senversa presented an appropriate discussion around the useability of the data for the purposes of the assessment/relevant objectives of the report.
Analytical methods used, including any deviations	Sample receipt documentation has been appended to Senversa reports which clearly specifies the analytical methods. Deviations (if presented) are reported on laboratory documentation.
Laboratory accreditation for analytical methods used, also noting any methods used which are not covered by accreditation	Senversa stated that the laboratories were NATA accredited for the analysis performed.
Laboratory performance for the analytical method using inter-laboratory duplicates	Senversa documented laboratory performance outliers which exceed the Senversa and laboratory DQIs. Where deviations have occurred, they have been appropriately discussed.
Surrogates and spikes used throughout the full method process, or only in parts. Results are corrected for the recovery	This information was presented within the laboratory documentation appended to Senversa reports.
A list of what spikes and surrogates were run with their recoveries and acceptance criteria (tabulate)	
Practical quantification limits (PQL)	
Reference laboratory control sample (LCS) and check results	
Laboratory duplicate results (tabulate)	
Laboratory blank results (tabulate)	
Results are within control chart limits	
Evaluation of all quality assurance/control information listed above against the stated data quality objectives, including a quality assurance/control data evaluation	

13.1 QA/QC summary

When looking holistically at the whole dataset collected as part of the remediation validation works, Senversa (2024i) stated that some minor deviations from the QA/QC acceptance criteria were recorded for field duplicate and triplicate frequency and some exceedances of adopted RPD criteria between some primary and duplicate/triplicate samples were also recorded. However, Senversa noted that whilst some QA/QC results were outside the specified acceptance criteria, they were not considered to significantly impact the quality or representativeness of the data and that the majority of the results indicated that precision and accuracy of the data was within acceptable limits. Senversa (2024i) concluded that the results were suitable for use for their intended purpose in forming conclusions relation to the contamination status of soil, soil vapour and groundwater at the site.

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13.2 Auditor discussion – quality assurance and quality control

Senversa has presented validation results in a series of interim reports. Each interim report included an assessment of quality assurance and quality control including an assessment of:

- Field duplicate/triplicate frequency and relative percentage differences between primary and duplicate samples
- Rinsate blank frequency and results
- Trip blank and trip spike frequency and results
- Sample preservation, handling and holding times
- Laboratory quality control assessment (e.g. laboratory duplicates, control spikes, surrogate recovery, method blanks, matrix spike recoveries and matrix spike recovery duplicates).
- Tabulated trip blank, trip spike and RPD results were presented

Where deviations from the stated data quality indicators (DQIs) were reported, Senversa presented a logical discussion with regards to the impact of the discrepancies in relation to the useability of the dataset(s) in the context of the assessment.

The auditor progressively reviewed each of the individual data quality assessments and all comments were provided to Senversa within interim audit advice (IAA) (refer to **Appendix B**) and subsequently addressed by Senversa. The auditor notes that Senversa has documented some deviations from the planned acceptance criteria, however, the auditor agrees with Senversa that these discrepancies are generally minor and unlikely to significantly impact the overall useability of the data for the purposes of Stage 1 validation.

The auditor noted that Senversa collected only a few rinsate samples as part of the investigation and validation sampling despite utilising some pieces of re-useable sampling equipment, e.g. hand augers, interphase probes/dip meters etc. The auditor however considered this to be a relatively minor issue given that Senversa confirmed that de-contamination was performed on equipment in accordance within the RWP. The auditor also is of the opinion that the absence of rinsate blanks suggests that decontamination of equipment could not be demonstrated, but that this could only lead to potential cross contamination (if it occurred) which could only result in additional remediation, not less.

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14. Other considerations

14.1 Ecological considerations

The site and surrounding area consist of commercial/ industrial land use and high rise apartments. Apart from some ornamental urban parks, there are no ecological communities in the vicinity of the site. The RAP also identified limited ecological receptors or sensitive environments on the site, or immediately surrounding the site. The proposed development will include an open space park and the remaining portions of the site are likely to included minor landscaping areas with remaining areas covered by roads, pavement and buildings.

The DSI report documented exceedances of the ecological assessment criteria for B(a)P, TRH, copper and zinc in some fill materials underlying roadways, Parcel, 2 and Parcel 4. The exceedances were within fill material. The RAP considered all fill is not suitable for use as growing media, unless validated as suitable within the root zone of minor landscaping areas (e.g. small garden beds or trees adjacent to the road). The fill material within the open space park area has been removed as part of the Source site soil removal in RA2.

Shallow groundwater on the site may migrate off-site and discharge to Shea's Creek, which is the nearest surface water body located to the west of the site. Near the site, the creek comprises a concrete box-culvert, which flows along a former natural drainage line to Alexandra Canal. Off-site migration and possible seepage into the Sheas Creek have been has assessed and addressed via the Management Order. Previous assessments have concluded there are negligible risks from VCHs from groundwater migration and ingress with NSW EPA agreeing to cessation of monitoring of Shea's Creek surface water in 2014 (Notice Number 20144422 dated 28 August 2014) and air space in 2016 (Notice Number 20154444 dated 9 February 2016).

Senversa (2024i) noted that some soils at the site may not be suitable for use as a growing medium, for example, soils within and adjacent to RA11. However, Senversa (2024i) reported that soils within the Main Audit Area are generally considered suitable for use as growing media. Senversa (2024i) reported that soils within the Recreational Audit Area generally comprise backfilled VENM and site won soils validated as suitable for public open space use and therefore there is considered to be no unacceptable risk to ecological receptors from soils in this area. Senversa (2024i) also stated that soils in the Pedestrian Link Audit Area are of limited ecological value as this area will be paved – noting that the area was backfilled with imported VENM.

14.2 Aesthetic impacts

Aesthetic impacts have the potential to be present within fill soils located beneath retained road, investigations within and proximal to this location have noted some inclusions of brick, plastic, metal, concrete fragments, wood. However, Senversa did not observe any odours or dark staining during any assessment works conducted in this area. If this area requires excavation to facilitate future developments, the future developer should take steps to test materials for off site disposal (if the material is not to be retained on site) and if necessary segregate materials that could be reused on site that are aesthetically impacted. The auditor and the auditor assistant did not identify odorous or stained soils during the site visits that would constitute an aesthetic issue.

14.3 Chemical mixtures

These aspects are not considered relevant for the purposes of this audit.

14.4 Potential contaminant migration

Senversa (2024i) reported that, *'validation was conducted per the VWP that supports that migration of VCH contamination from the Source Site (located within the Stage 2 remediation boundary) has been adequately addressed through installation and ongoing operation of the groundwater containment system as required by the RAP and Management Order'.* During exaction of RA2, Senversa inspected the western side of the exposed sheet pile wall (i.e. down hydraulic gradient) and noted that no seepage was observed. The auditor noted that post remediation groundwater testing for the presence of VCHs at locations within RA2 did not record any of these chemicals at concentrations greater than the RBSLs. These results demonstrate that the removal of contaminated

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soil from RA2 has improved the groundwater quality in this area of the site. Coupled with the control of contaminant migration from the source of the VCHs (Stage 2), the risk of migration of contaminants from Stage 1 is considered low.

14.5 Auditor discussion – other considerations

The auditor noted that the conceptual site model presented in the RAP (Senversa, 2021a) demonstrated the habitat value of the site appears to be negligible with limited environmental values present requiring protection. Following the re-development of Stage 1, it is possible that site soils could be used as growing media within minor landscaping areas, but Senversa (2024i) reported that soils within the main audit area are generally suitable for use as growing medium and soil within the Stage 1 park area has also been validated as suitable for recreational/public open space use.

Groundwater receptors are generally not considered within the Senversa (2024i) post remediation conceptual site model, but the auditor deemed this a reasonable assumption given the noted restrictions on groundwater abstraction at the site and surrounding area, the distance between the site to receiving water bodies and off-site ecological receptors and the typical depth of groundwater. Furthermore, future basement excavations would need to be tanked, thereby restricting groundwater ingress. The auditor considered that this information supports that VCHs in groundwater would not generally represent a direct contact hazard to intrusive maintenance workers or other human health/ecological receptors.

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15. Audit conclusions

15.1 Consultant conclusions

In summary, Senversa (2024i) concluded that:

- The Stage 1 remediation works were completed in a manner that was generally consistent with the requirements of the RAP and modified RWP and any deviations were documented.
- The Stage 1 remediation works were validated in accordance with the requirements of the RAP, RWP, VWP and the ASC NEPM and other relevant guidelines and any deviations were presented within Senversa (2024i).
- The Main Audit Area is suitable for mixed medium to high density residential use with minimal opportunity for soil access and commercial uses
- The Recreational Audit Area is suitable for open space recreational use, mixed medium to high density residential use with minimal opportunity for soil access and commercial uses.
- The Substation Audit Area is suitable for continued use as a substation and a roadway (as specified in the RAP)
- The Pedestrian Link Audit Area is suitable for use as a pedestrian link subject to appropriate implementation of a passive LTEMP as a notification mechanism and to manage exposure to residual fill materials at depth if disturbed.

15.2 Auditor discussion – consultant conclusions

The auditor supports the overall conclusions made by Senversa, and agrees that, in general, remediation works appear to have been conducted in accordance with the approved RAP (Senversa, 2021a) and approved RWP (Senversa, 2023b). Some deviations to the approved remediation and validation works presented within the RAP and RWP are noted, however, these are generally considered to be acceptable given that the deviations generally relate to practical limits of excavation associated with potential safety issues (e.g. limits on mechanical exaction sampling in the Substation Audit Area due to the presence of high voltage electrical cables or in the Pedestrian Link Audit Area due to the presence of buried building foundations etc).

The auditor concludes that, based on the information provided by Senversa within the documents listed in **Section1.6** and **Section 1.7,** and, based on the various site inspections conducted by the auditor and/or the auditor's assistant/s (refer to **Section 1.11** and **Appendix C)** the following Audit Areas (as presented within **Appendix D** of this SAR) are considered to be suitable for the following uses:

- The **Main Audit Area** is suitable for use as mixed medium to high density residential use (with minimal opportunity for soil access) and commercial use.
- The **Recreational Audit Area** is suitable for open space recreational use.
- The **Substation Audit Area** is suitable for commercial/industrial use (i.e. continued use as a substation or for potential future use as a sealed roadway)
- The **Pedestrian Link Audit Area** is suitable for commercial/industrial use (i.e. a mostly sealed pedestrian walkway) subject to implementation of the Pedestrian Link – Long Term Environmental Management Plan (Asbestos Management Plan) (Senversa, 2024bo).

These conclusions relate to the suitability of each of the above audit areas for their intended land use (as also defined above and within each of the relevant Site Audit Statements (SAS)). Should material presently retained on site require off-site disposal as part of future development, additional waste classification testing and reporting (in accordance with NSW EPA (2014) Waste Classification Guidelines will be required.

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16. Disclaimer

This Site Audit Report (the "Report") and accompanying Site Audit Statement have been prepared in accordance with relevant provisions of P*art 4 of the Contaminated Land Management (CLM) Act 1997 (NSW) ("CLM Act 1997")*. The Site Audit Statement represents the Auditor's opinion of the suitability and appropriateness of the documentation listed in Section 1.6 and 1.7 to validate the site as suitable (from a contamination perspective) for the defined proposed land uses, based on the condition of the site at the date the Site Audit Statement is signed.

This Report:

1. has been prepared by Andrew Kohlrusch and his support team as indicated in the appropriate sections of this Report ("GHD") for Jeffman Pty Ltd (the "Client');
2. may be used and relied on by the Client;
3. may be used by and provided to the EPA and the relevant planning authority for the purpose of meeting statutory obligations in accordance with the relevant sections of the CLM Act 1997 or the Environment Planning and Assessment (EP&A) Act 1979;
4. may be provided to other third parties but such third parties' use of or reliance on the Report is at their sole risk, as this Report must not be relied on by any person other than those listed in paragraphs 1-3 above without the prior written consent of GHD; and
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The services undertaken by the Auditor, his team and GHD in connection with preparing this Report were undertaken in accordance with current profession practice and by reference to relevant guidelines made or approved by the EPA under Section 105 of the CLM Act 1997.

The opinions, conclusions and any recommendations in this Report are based on assumptions made by the Auditor, [his/her/their] team and GHD when undertaking services and preparing the Report ("Assumptions"), as specified throughout this Report.

GHD and the Auditor expressly disclaim responsibility for any error in, or omission from, this Report arising from or in connection with any of the Assumptions being incorrect.

Subject to the paragraphs in this section of the Report, the opinions, conclusions and any recommendations in this Report are based on conditions encountered and information reviewed at the time of preparation of this Report and are relevant until such times as the site conditions or relevant legislations changes, at which time, GHD expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with those opinions, conclusions and any recommendations.

The Auditor and GHD has prepared this Report on the basis of information provided by the Client, Senversa and EnviroPacific and others who provided information to GHD (including Government authorities), which the Auditor and GHD has not independently verified or checked ("Unverified Information") beyond the agreed scope of work.

The Auditor and GHD expressly disclaim responsibility in connection with the Unverified Information, including (but not limited to) errors in, or omissions from, the Report, which were caused or contributed to by errors in, or omissions from, the Unverified Information.

This Report and Site Audit Statement should be read in full and no excerpts are taken to be representative of the findings of this Report.

The opinions, conclusions and any recommendations in this Report are based on information obtained from, and testing undertaken at or in connection with, specific sampling points and may not fully represent the conditions that may be encountered across the site at other than these locations. Site conditions at other parts of the site may be different from the site conditions found at the specific sampling points.

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Although reasonable care has been used to assess the extent to which the data collected from site is representative of the overall site condition and its beneficial uses, investigations undertaken in respect of this Report are constrained by the particular site conditions as discussed in this Report. As a result, not all relevant site features and conditions may have been identified in this Report.

Site conditions (including any the presence of hazardous substances and/or site contamination) may change after the date of this Report. The Auditor and GHD expressly disclaim responsibility:

– arising from, or in connection with, any change to the site conditions; and
– to update this Report if the site conditions change.

These disclaimers should be read in conjunction with the entire Report and no excerpts are taken to be representative of the findings of this Report.

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Appendix A

Figures



Path: \\Vic-fp-01\gis\01_Jobs\1 NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_049_Stage 1 RVR.aprx

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Legend

- Management Order Area (MO Notice Number 20111403)
- Source Site (MO Notice Number 20154405)
- The Site
- Lot Boundary
- Excluded from Site Audit Area
- Stage 1; Stage 2
- Stage line

Notes:
Aerial Imagery (17/03/2023) © Metromap

Created:	M. Black	Date:	27/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:1,100 (A3)
File:	S19142_049_F001_Site Location		

0 30 60 Metres

Coordinate System: GDA 1994 MGA Zone 56

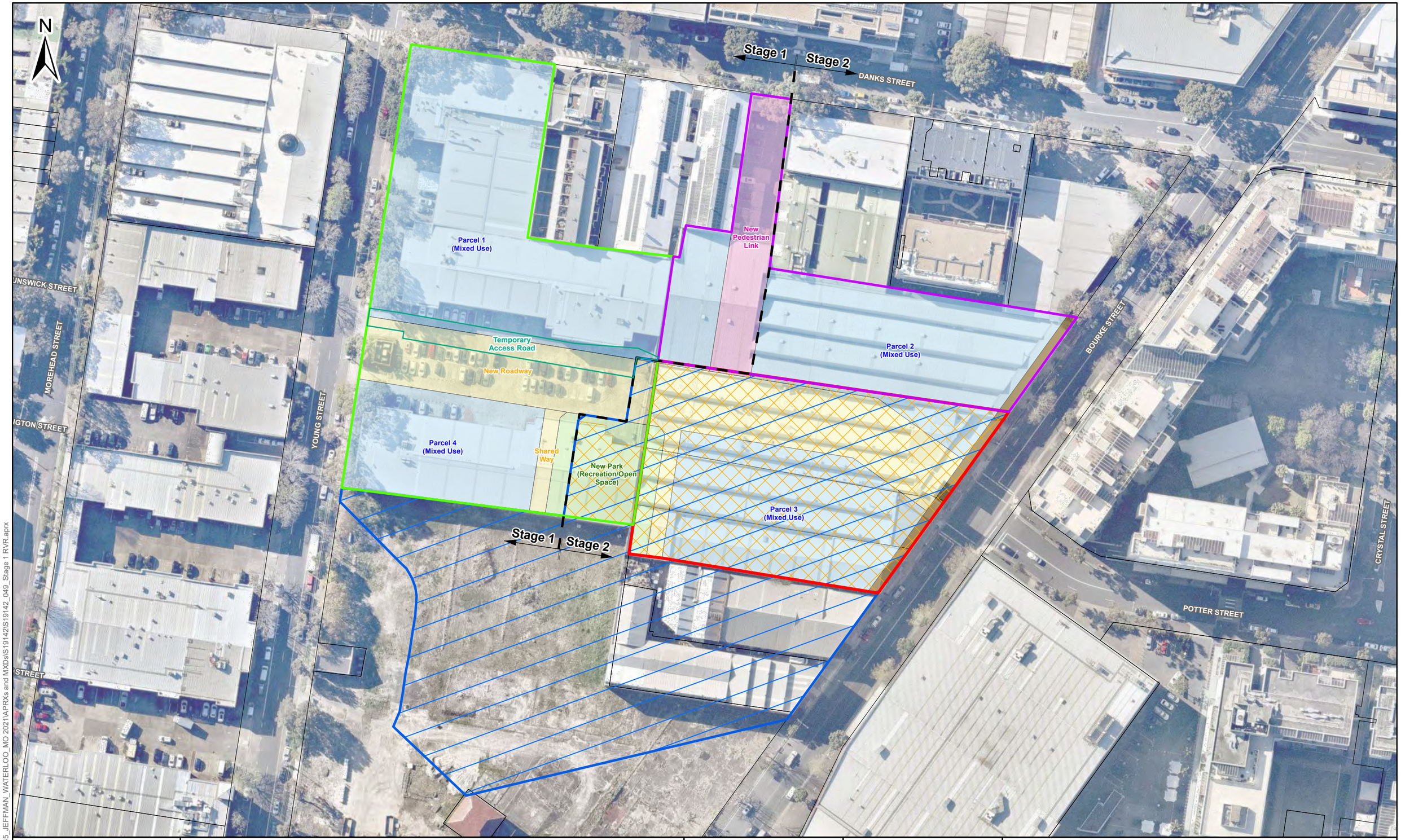
Figure No: 1

Title: Site Location

Project: Stage 1 Remediation Validation Report

Location: 887 Bourke Street, Waterloo NSW, Australia

Client: Jeffman Pty Ltd



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Legend

- Management Order Area (MO Notice Number 20111403)
- Source Site (MO Notice Number 20154405)
- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street
- Lot Boundary
- Stage 1; Stage 2
- Stage line

Development Land Use

- Parcel (Mixed Use)
- New Road
- New Park (Recreation/Open Space)
- New Pedestrian Link
- Future Footpath Easement
- Temporary Access Road

Notes:
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Created:	M. Black	Date:	17/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:1,100 (A3)
File:	S19142_049_F002_Dev Application Layout		

0 5 10 20 30 40 50 60 70 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 2

Title: Site Plan – Development Application Layout

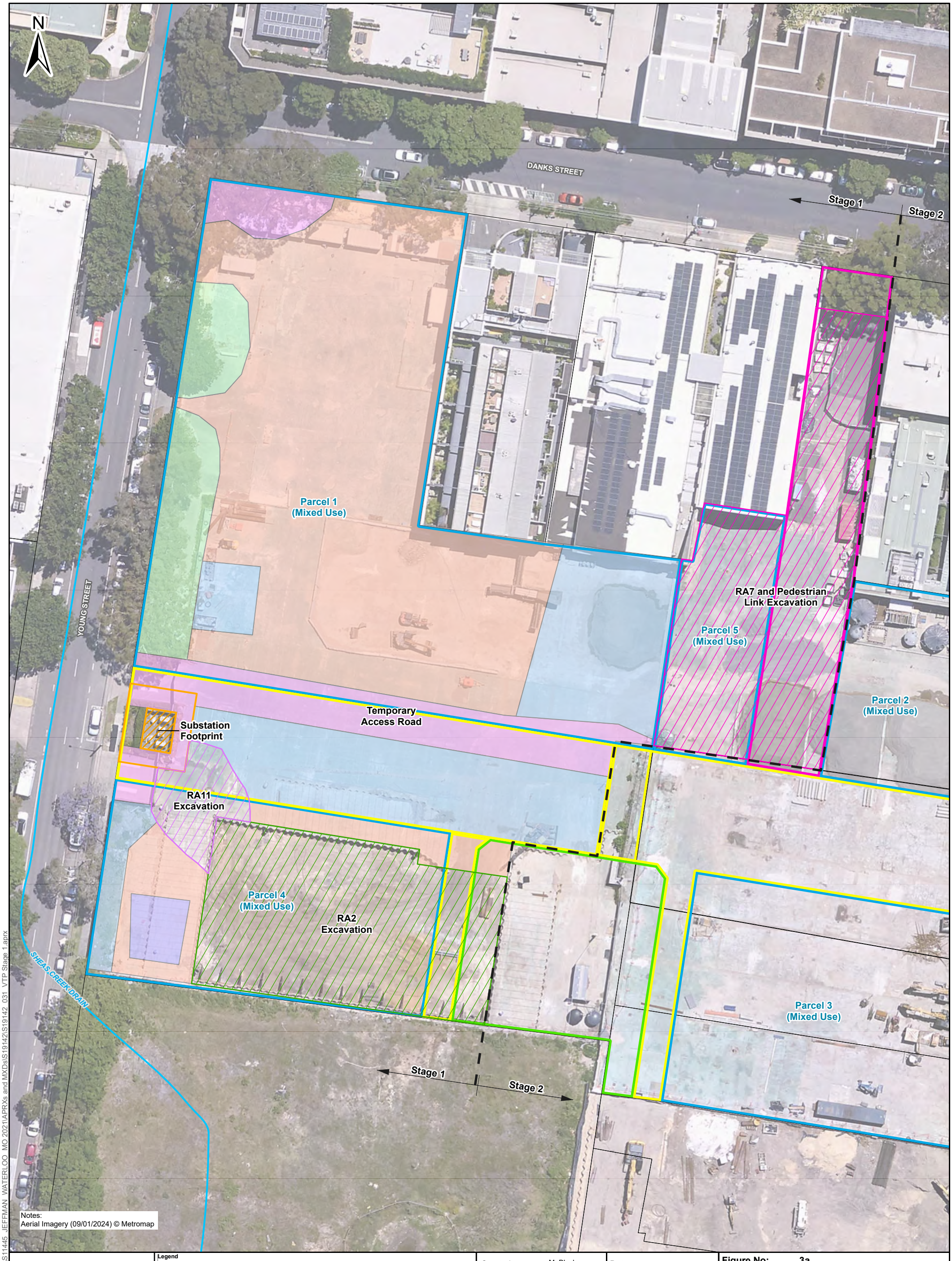
Project: Stage 1 Remediation Validation Report

Location: 887 Bourke Street, Waterloo NSW, Australia

Client: Jeffman Pty Ltd

Path: S:\01_Jobs\1.NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_049_Stage 1 RVR.aprx

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Legend

- Stage 1; Stage 2
- Stage line
- RA11 Excavation
- RA2 Excavation
- RA7 and Pedestrian Link Excavation
- Substation 3m Exclusion Zone
- Substation Footprint

Development Land Use

- Parcel (Mixed Use)
- New Road
- New Park (Recreation/Open Space)
- New Pedestrian Link

Area of Retained/Removed Hardstand

- Garden Bed
- Retained Slab
- Secondary Slab - Removed
- Single Slab - Removed
- Tertiary Slab - Removed
- Lot Boundary
- Sheas Creek Drain

Created:	M. Black	Date:	3/09/2024
Reviewed:	B. Chapple	Revision:	0
Approved:	M. Beasley	Scale:	1:600 (A3)
File:	S19142_031_F002_Retained and Removed Hardstand		

0 12.5 25 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 3a

Title: Areas of Retained and Removed Hardstand

Project: Remediation - Stage 1

Location: 887 Bourke Street, Waterloo NSW, Australia

Client: Jeffman Pty Ltd

Path: S:\01_Jobs\1 NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_031_VTP Stage 1.aprx

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Development Land Use
- Parcel (Mixed Use)
- New Road
- New Pedestrian Link
- Lot Boundary
- Stage 1; Stage 2
- Stage line
- Site Access Gate

- Proposed Non-VCH Remediation Extent
- Northern Portion of Pedestrian Link
- Southern Portion of Pedestrian Link (Modified end land use)
- Part Parcel 1
- Lot 3 Young Street
- Lot 4 Bourke Street

Created:	M. Black	Date:	13/09/2024
Reviewed:	M. Linz	Revision:	0
Approved:	M. Beasley	Scale:	1:300 (A3)
File:	S19142_024_F001_Overview of Validation Areas		

0 5 10 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 3b

Title: Overview of Validation Areas

Project: Stage 1 Remediation

Location: 887 Bourke Street, Waterloo NSW, Australia

Client: Jeffman Pty Ltd

Path: S:\01_Jobs\1_NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_024.aprx

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Legend

- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street
- Lot Boundary
- Stage 1; Stage 2
- Stage line

Amended Development Landuse

- Medium to High Density Residential
- Pedestrian Link
- Recreational / Open Space
- Approximate Marker Layer Location
- Approximate Location of Redundant Sewer Main

Created:	M. Black	Date:	13/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:260 (A3)
File:	S19142_024_F005_Marker Layer Location		

0 1 2 4 6 8 10 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 4a

Title: Amended Land Use and Marker Layer

Project: Stage 1 Remediation

Location: 887 Bourke Street, Waterloo, NSW, AU

Client: Jeffman Pty Ltd

Path: S:\01_Jobs\1.NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_024.aprx

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Public Access

DSTP24_0.2
DSTP24_0.5
DSTP24_0.9
DSHA02_0.3
DSHA02_0.5
DSHA02_0.2
DSHA02_0.7
DSHA01_0.2
DSHA01_0.3
DSHA01_0.5
DSN_S001_0.8
DSN_S001_0.5
DSW_S001_ 0.5
DSN_S002_0.8
DSN_S002_0.5
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DSN_0.3_0.5
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DSW_S002_ 0.5
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DSE_S012_1.0
SB13
DSW_S003_ 0.5
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DSTP13_2.0
DSTP13_2.4
DSE_S010_1.0
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RA7_W7A_0.5
RA7_W4_0.5
RA7_W6_0.5
RA7_W6_1.0
RA7_W28_1.0
RA7_W4_1.0
RA7_B2_2.0
RA7_W7_1.0
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RA7_W4_0.5B
RA7_W7_0.5
RA7_B10_2.0
RA7_W4_0.5A
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RA7_W5_0.5
RA7_B16_2.0
RA7_B21_2.0
VTP25
RA7_W17_1.0
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RA7_B20_2.0
RA7_B12_2.0
RA7_B17_2.0
RA7_W17_0.5
RA7_B22_2.0
TP011
RA7_W27_0.9
RA7_W27_0.5
RA7_B9_2.0
RA7_B25_2.0
RA7_B6_2.0
RA7_W39_0.5
MW117
RA7_B18_2.0
RA7_B23_2.0
RA7_W39_1.0
RA7_B14_2.0
RA7_B13_2.0
RA7_B24_2.0
MW121
RA7_W40_0.5
RA7_B26_2.0
RA7_W40_1.0
RA7_W49_0.75
RA7_W49_1.5
RA7_B36_2.0
VTP24
TP012
RA7_B33_2.0
RA7_B30_2.0
RA7_B27_2.0
TP018
RA7_W41_0.75
RA7_W41_1.5
VTP18
RA7_W48_0.75
RA7_B37_2.0
RA7_B34_2.0
RA7_B31_2.0
RA7_B28_2.0
RA7_W48_1.5
RA7_W50_1.0
RA7_W42_0.75
RA7_B41_2.5
RA7_W42_1.5
RA7_B40_2.5
MW22
RA7_B38_2.0
RA7_B38A_2.5
RA7_W53_1.0
SV09
RA7_B35_2.0
TP016
RA7_B39_ 3.0
RA7_W51_1.0
VTP17
RA7_W47_0.75
RA7_B42_2.5
RA7_B29_2.0
RA7_W47_1.5
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RA7_B32_2.0
RA7_W52_1.0
RA7_W46_0.75
RA7_W43_0.75
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RA7_W45_0.75
MW21
BH55
RA7_W43_1.5
RA7_W45_1.5
RA7_W44_0.75
RA7_W44_1.5
MW20
BH54

Notes:
Aerial Imagery (09/01/2024) © Metromap

Legend

- Validation Test Pit
- Historical Sample Location - Likely Remaining Insitu
- Lot Boundary
- Northern Portion of Pedestrian Link
- Southern Portion of Pedestrian Link (Modified end land use)
- Part Parcel 1
- Stage line

Excavation Depths
- 0.9 to 1.0 m bgs concrete footing
- 1mbgs battered to 2mbgs
- 2mbgs
- 2.5mbgs

- Site Access Gate

ACM Impact
- Asbestos Below HSL B
- Asbestos Above HSL B
- Exceeds Health-Based Criteria
- Validation Sample - Base
- Validation Sample - Wall
- Hand Auger
- Test Pit

Created:	M. Black	Date:	13/09/2024
Reviewed:	M. Linz	Revision:	0
Approved:	M. Beasley	Scale:	1:260 (A3)
File:	S19142_024_F003_Health-Based Criteria Exceedances		

0 5 10 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 4b

Title: Excavation Depths and Health-Based Criteria Exceedances

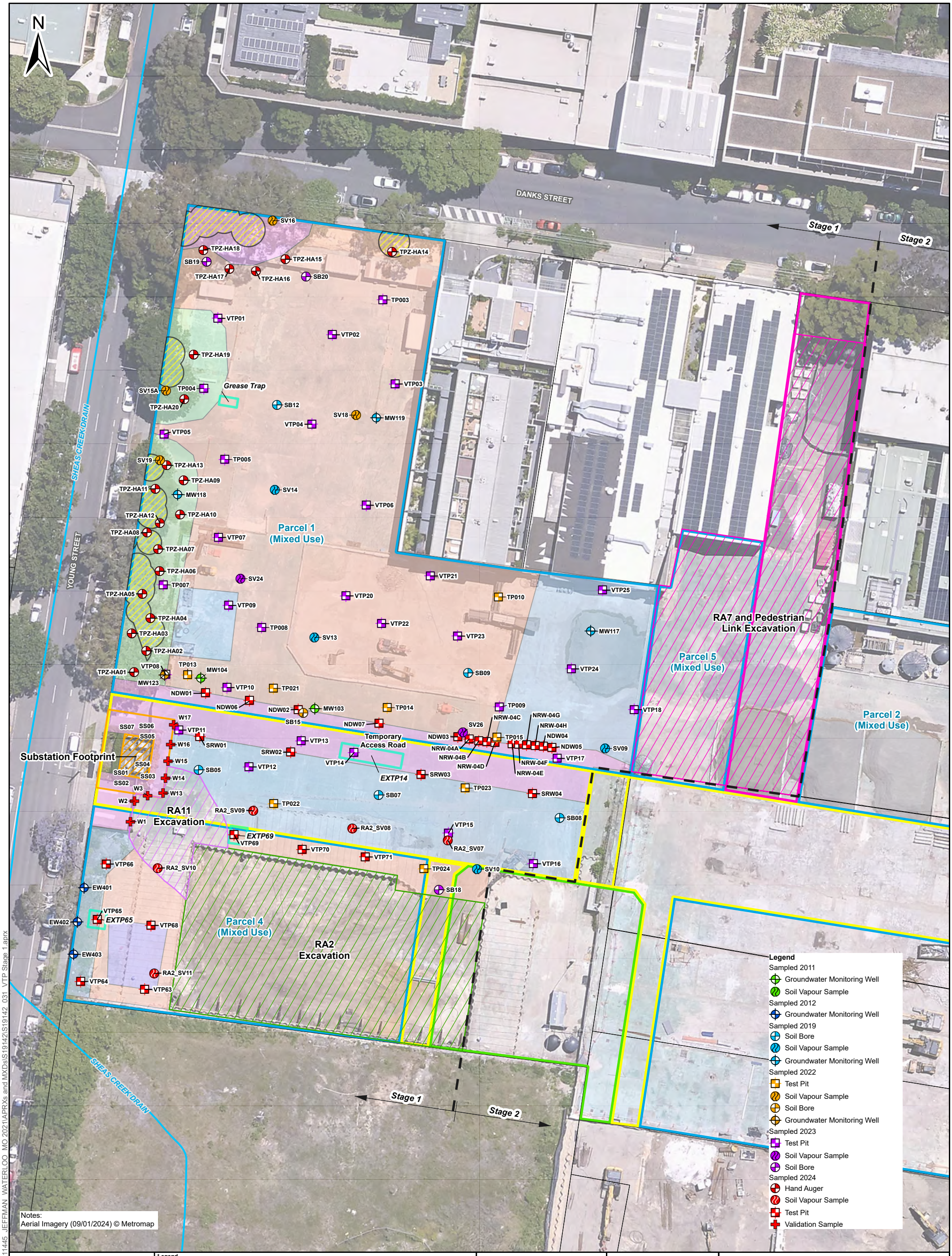
Project: Stage 1 Remediation

Location: 887 Bourke Street, Waterloo NSW, Australia

Client: Jeffman Pty Ltd

Path: S:\01_Jobs\1_NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_024.aprx

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Path: S:\01_Jobs\1_NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_031_VTP Stage 1.aprx

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Legend
- Stage 1; Stage 2
- Stage line
- RA11 Excavation
- RA2 Excavation
- RA7 and Pedestrian Link Excavation
- Substation 3m Exclusion Zone
- Substation Footprint
- Root Zone of Retained Trees
- Excavation

Development Land Use
- Parcel (Mixed Use)
- New Road
- New Park (Recreation/Open Space)
- New Pedestrian Link

Area of Retained/Removed Hardstand
- Garden Bed
- Retained Slab
- Secondary Slab - Removed
- Single Slab - Removed
- Tertiary Slab - Removed
- Lot Boundary
- Sheas Creek Drain

Created:	M. Black	Date:	19/09/2024
Reviewed:	B. Chapple	Revision:	0
Approved:	M. Beasley	Scale:	1:600 (A3)

File: S19142_031_F003A_Soil Data Remaining Outside Rem Extents

0 12.5 25 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 5

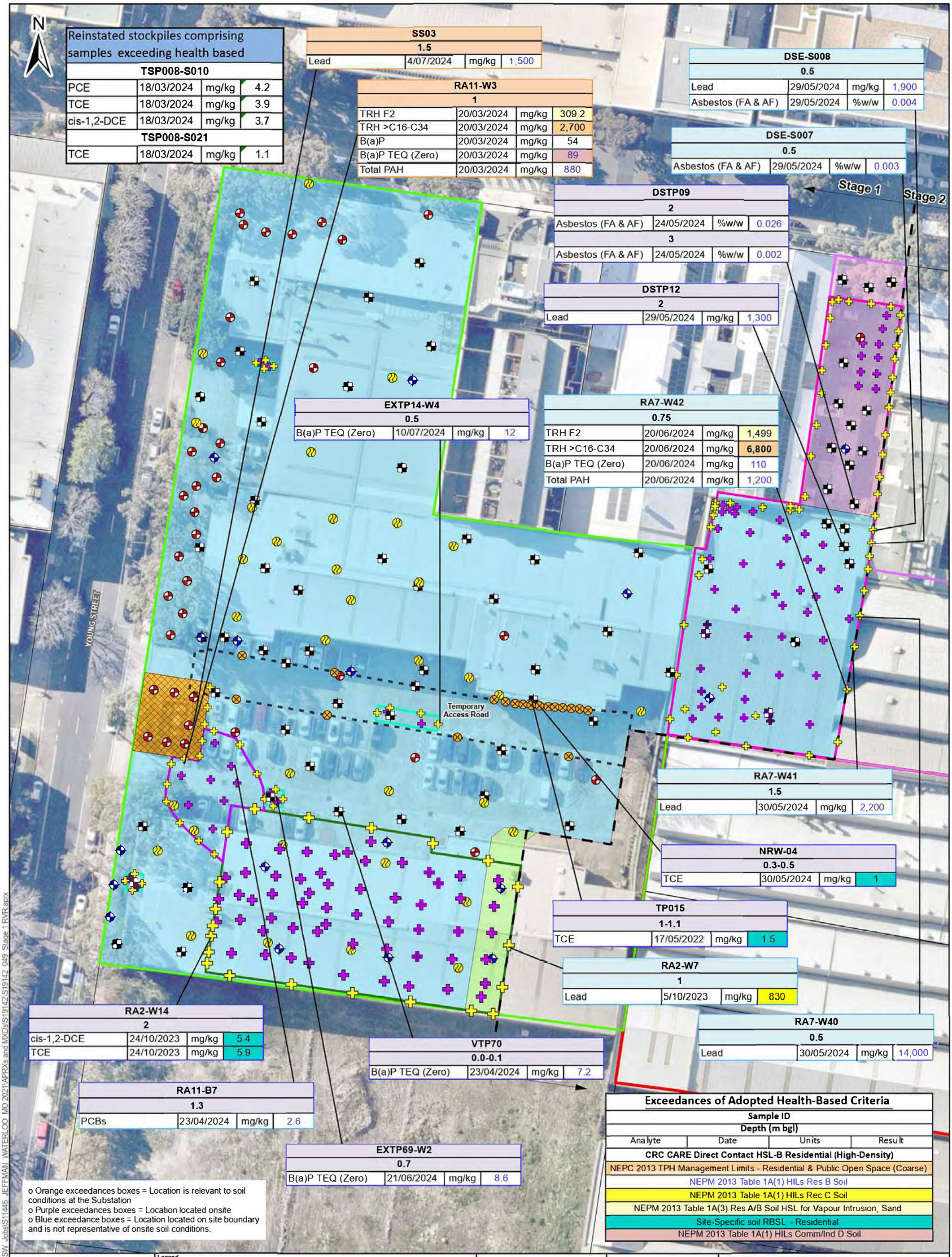
Title: Soil Data Remaining In-situ Outside of Remediation Extents

Project: Remediation - Stage 1

Location: 887 Bourke Street, Waterloo NSW, Australia

Client: Jeffman Pty Ltd

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Reinstated stockpiles comprising samples exceeding health based			
TSP008-S010			
PCE	18/03/2024	mg/kg	4.2
TCE	18/03/2024	mg/kg	3.9
cis-1,2-DCE	18/03/2024	mg/kg	3.7
TSP008-S021			
TCE	18/03/2024	mg/kg	1.1

SS03			
1.5			
Lead	4/07/2024	mg/kg	1,500

RA11-W3			
1			
TRH F2	20/03/2024	mg/kg	309.2
TRH >C16-C34	20/03/2024	mg/kg	2,700
B(a)P	20/03/2024	mg/kg	54
B(a)P TEQ (Zero)	20/03/2024	mg/kg	89
Total PAH	20/03/2024	mg/kg	880

DSE-S008			
0.5			
Lead	29/05/2024	mg/kg	1,900
Asbestos (FA & AF)	29/05/2024	%w/w	0.004

DSE-S007			
0.5			
Asbestos (FA & AF)	29/05/2024	%w/w	0.003

DSTP09			
2			
Asbestos (FA & AF)	24/05/2024	%w/w	0.026
3			
Asbestos (FA & AF)	24/05/2024	%w/w	0.002

DSTP12			
2			
Lead	29/05/2024	mg/kg	1,300

EXTP14-W4			
0.5			
B(a)P TEQ (Zero)	10/07/2024	mg/kg	12

RA7-W42			
0.75			
TRH F2	20/06/2024	mg/kg	1,499
TRH >C16-C34	20/06/2024	mg/kg	6,800
B(a)P TEQ (Zero)	20/06/2024	mg/kg	110
Total PAH	20/06/2024	mg/kg	1,200

RA7-W41			
1.5			
Lead	30/05/2024	mg/kg	2,200

NRW-04			
0.3-0.5			
TCE	30/05/2024	mg/kg	1

TP015			
1-1.1			
TCE	17/05/2022	mg/kg	1.5

RA2-W7			
1			
Lead	5/10/2023	mg/kg	830

RA2-W14			
2			
cis-1,2-DCE	24/10/2023	mg/kg	5.4
TCE	24/10/2023	mg/kg	5.9

VTP70			
0.0-0.1			
B(a)P TEQ (Zero)	23/04/2024	mg/kg	7.2

RA7-W40			
0.5			
Lead	30/05/2024	mg/kg	14,000

RA11-B7			
1.3			
PCBs	23/04/2024	mg/kg	2.6

EXTP69-W2			
0.7			
B(a)P TEQ (Zero)	21/06/2024	mg/kg	8.6

o Orange exceedances boxes = Location is relevant to soil conditions at the Substation
o Purple exceedances boxes = Location located onsite
o Blue exceedance boxes = Location located on site boundary and is not representative of onsite soil conditions.

Exceedances of Adopted Health-Based Criteria

Sample ID			
Depth (m bgl)			
Analyte	Date	Units	Result
CRC CARE Direct Contact HSL-B Residential (High-Density)			
NEPC 2013 TPH Management Limits - Residential & Public Open Space (Coarse)			
NEPM 2013 Table 1A(1) HILs Res B Soil			
NEPM 2013 Table 1A(1) HILs Rec C Soil			
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand			
Site-Specific soil RBSL - Residential			
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil			

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Legend
- Grab Sample
- Groundwater Monitoring Well
- Soil Bore
- Soil Vapour Sample
- Test Pit
- Validation Sample - Base
- Validation Sample - Wall
- Excavation
- Temporary Access Road
- Stage 1: Stage 2
- Stage line
- Amended Development Landuse
- Main Audit Area (Medium to High Density Residential)
- Pedestrian Link Audit Area
- Recreational Audit Area
- Substation Audit Area
- RA11 Excavation
- RA2 Excavation
- RA7 and Pedestrian Link Excavation
- Lot Boundary
- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street

Created:	M. Black	Date:	30/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:600 (A3)
File:	S19142_049_F013 Soil Exceedances Health Based		

0 2.5 5 10 15 20 25 Metres
Coordinate System: GDA 1994 MGA Zone 56

Figure No: 6a
Title: Residual Soil Impacts Exceeding Health-Based Criteria
Project: Stage 1 Remediation Validation Report
Location: 887 Bourke Street, Waterloo, NSW, AU
Client: Jeffman Pty Ltd

Path: W:\c-fp-01\gis\01_Jobs\1 NSW Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_049_Stage 1 RVR.aprx

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DANKS STREET

YOUNG STREET

Stage 1

Stage 2

RA1-SV01
RA1-SV02
RA1-SV03
RA1-SV04
RA1-SV05
RA1-SV06
RA1-SV07
RA1-SV08
RA1-SV09
RA1-SV10
RA1-SV11

Temporary Access Road

RA2_SV09
RA2_SV08
RA2_SV07
RA2_SV13
RA2_SV10
RA2_SV12
RA2_SV04
RA2_SV05
RA2_SV06
RA2_SV11
RA2_SV03
RA2_SV02
RA2_SV01

RA2_SV010			
0.5			
TCE	17/07/2024	mg/kg	7,730
TCE	31/07/2024	mg/kg	1,150
TCE	19/08/2024	mg/kg	419

Exceedances of Adopted Health-Based Criteria			
Sample ID			
Depth (m bgl)			
Analyte	Date	Units	Result
Modified Residential RBSL (Slab on Grade)			
S19142 Soil Vapour Open Space			
Modified Residential RBSL (Basement)			

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Legend

- Soil Vapour Sample
- Excavation
- Temporary Access Road
- Stage 1; Stage 2
- Stage line
- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street

Amended Development Landuse

- Main AuditArea (Medium to High Density Residential)
- Pedestrian Link Audit Area
- Recreational Audit Area
- Substation Audit Area
- RA11 Excavation
- RA2 Excavation
- RA7 and Pedestrian Link Excavation
- Lot Boundary

Created:	M. Black	Date:	30/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:600 (A3)
File:	S19142_049_F015 Soil Vapour		

0 2.5 5 10 15 20 25 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 6b

Title: Final Verification Soil Vapour Sampling Locations Exceeding RBSLs (2024)

Project: Stage 1 Remediation Validation Report

Location: 887 Bourke Street, Waterloo, NSW, AU

Client: Jeffman Pty Ltd

Path: \\vic-fp-01\gis01 Jobs\1 NSW Jobs\S11445 JEFFMAN WATERLOO MO 2021\APRXs and MXDs\S19142\S19142_049 Stage 1 RVR.aprx

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DANKS STREET

YOUNG STREET

Stage 1

Stage 2

Temporary Access Road

Stage 1

Stage 2

Legend

- Grab Sample
- Groundwater Monitoring Well
- Soil Bore
- Soil Vapour Sample
- Test Pit
- Validation Sample - Base
- Validation Sample - Wall
- Excavation
- Temporary Access Road
- Stage 1: Stage 2
- Stage line

Amended Development Landuse

- Main Audit Area (Medium to High Density Residential)
- Pedestrian Link Audit Area
- Recreational Audit Area
- Substation Audit Area
- RA11 Excavation
- RA2 Excavation
- RA7 and Pedestrian Link Excavation
- Lot Boundary
- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street

Created:	M. Black	Date:	30/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:600 (A3)
File:	S19142_049_F012_Stage 1 Val Samples		

0 2.5 5 10 15 20 25 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 6c

Title: Stage 1 Validation Sample Locations

Project: Stage 1 Remediation Validation Report

Location: 887 Bourke Street, Waterloo, NSW, AU

Client: Jeffman Pty Ltd

Path: \\Wic-fp-01\gis\01_Jobs\1 NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142_049_Stage 1 RVR.aprx

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Exceedances of Adopted Ecological Criteria

Sample ID			
Depth (m bgl)			
Analyte	Date	Units	Result
NEPM 2013 EILs for Urban Residential / Public Open Space			
NEPM 2013 EILs for Commercial / Industrial			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil			
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil			

Reinstated stockpiles comprising samples exceeding soil ecological criteria			
TSP008-S024			
Copper	18/03/2024	mg/kg	750
SP034-S003			
Copper	27/03/2024	mg/kg	1200
SP59-S001			
TRH >C16-C34	20/06/2024	mg/kg	*310*

EXTP69-W2			
0.7			
TRH >C16-C34	21/06/2024	mg/kg	*620*

RA11-W11			
1			
Copper	23/04/2024	mg/kg	640

DSTP24			
0.2			
Nickel	1/07/2024	mg/kg	310

DSTP11			
2			
Zinc	29/05/2024	mg/kg	720

EXTP14-W4			
0.5			
TRH >C16-C34	10/07/2024	mg/kg	*370*

RA7-W4			
0.5			
Copper	9/01/2024	mg/kg	450

RA7-W17			
0.5			
TRH >C16-C34	11/12/2023	mg/kg	*530*

RA7-B36			
2			
TRH >C16-C34	20/06/2024	mg/kg	*890*

DSTP12			
2			
Lead	29/05/2024	mg/kg	1,300
TRH >C16-C34	29/05/2024	mg/kg	*450*

DSTP13			
2			
Copper	29/05/2024	mg/kg	400

SRW-04			
0.3-0.5			
Arsenic	29/05/2024	mg/kg	150
Zinc	29/05/2024	mg/kg	10,000

VTP64			
0.6-0.7			
Copper	23/04/2024	mg/kg	270
Zinc	23/04/2024	mg/kg	850

RA2-W14			
2			
TRH >C16-C34	24/10/2023	mg/kg	*770*

RA2-W1			
2			
TRH >C16-C34	24/10/2023	mg/kg	*450*

RA2-W3			
2			
TRH >C16-C34	24/10/2023	mg/kg	*440*

RA2-W11			
2			
TRH >C16-C34	24/10/2023	mg/kg	*400*

DANKS STREET

YOUNG STREET

Temporary Access Road

Stage 1

Stage 2

Stage 2

Legend

- Grab Sample
- Groundwater Monitoring Well
- Soil Bore
- Soil Vapour Sample
- Test Pit
- Validation Sample - Base
- Validation Sample - Wall
- Excavation
- Temporary Access Road
- Stage 1: Stage 2
- Stage line

Amended Development Landuse

- Main Audit Area (Medium to High Density Residential)
- Pedestrian Link Audit Area
- Recreational Audit Area
- Substation Audit Area
- RA11 Excavation
- RA2 Excavation
- RA7 and Pedestrian Link Excavation
- Lot Boundary
- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street

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Created:	M. Black	Date:	30/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:600 (A3)
File:	S19142_049_F014a Soil Exceedances Ecological		

0 2.5 5 10 15 20 25 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 6d

Title: **Residual Soil Impacts Exceeding Ecological Criteria Located On-site**

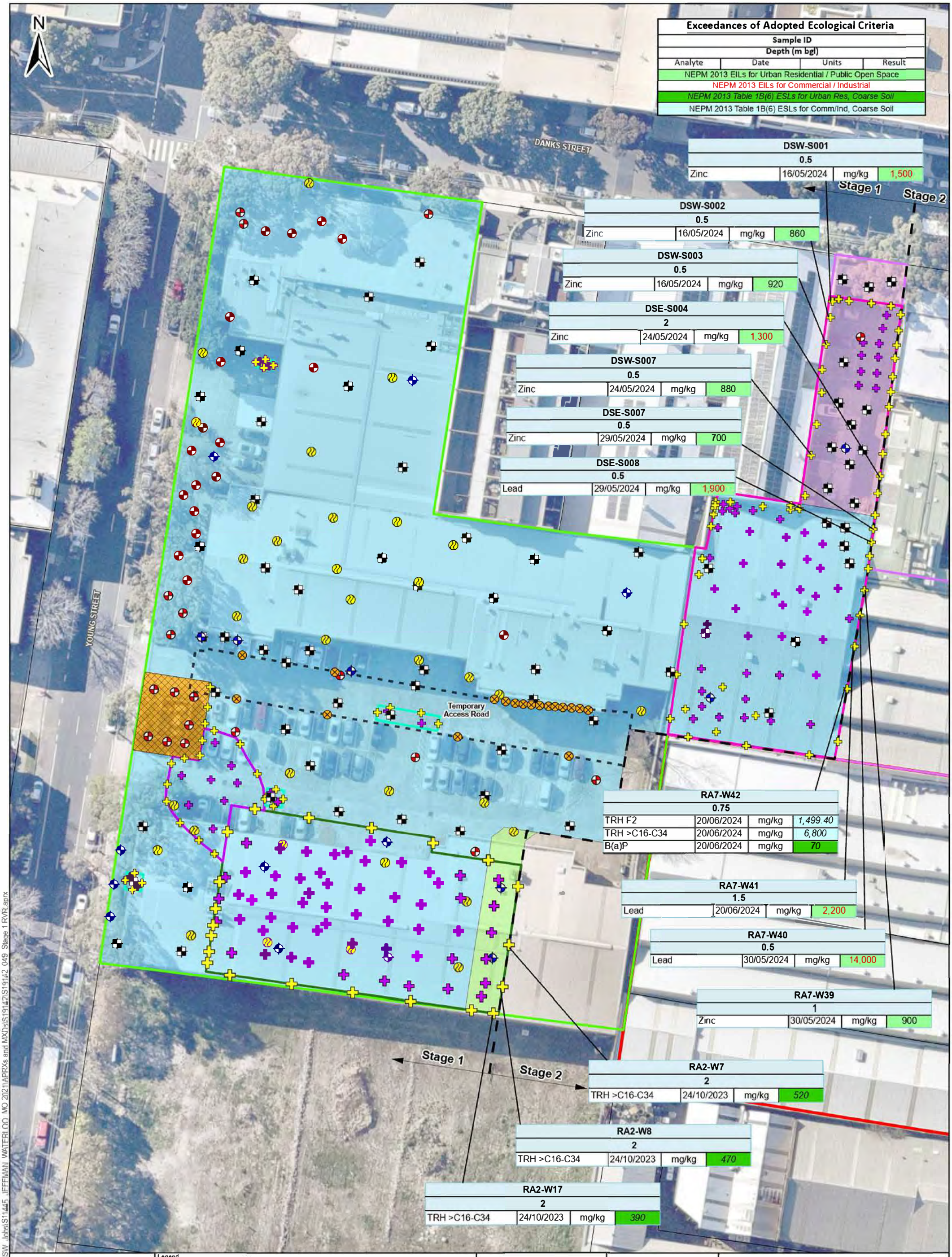
Project: Stage 1 Remediation Validation Report

Location: 887 Bourke Street, Waterloo, NSW, AU

Client: Jeffman Pty Ltd

Path: W:\c-fp-01\qis\01_Jobs\1 NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142_049_Stage 1 RVR.aprx

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SS07			
1			
Copper	4/07/2024	mg/kg	820
Zinc	4/07/2024	mg/kg	2,700

RA11-W15			
0.5			
TRH >C16-C34	29/05/2024	mg/kg	360

SS03			
1			
Copper	4/07/2024	mg/kg	1,200
Zinc	4/07/2024	mg/kg	730
1.5			
Lead	4/07/2024	mg/kg	1,500

RA11-W14			
0.5			
Copper	29/05/2024	mg/kg	1,000
1			
Copper	29/05/2024	mg/kg	300

RA11-W3			
0.5			
TRH >C16-C34	20/03/2024	mg/kg	310
1			
TRH >C16-C34	20/03/2024	mg/kg	2,700
TRH F2	20/03/2024	mg/kg	309.2
B(a)P	20/03/2024	mg/kg	54

RA11-W13			
0.5			
Copper	29/05/2024	mg/kg	710
1			
Copper	29/05/2024	mg/kg	420

Exceedances of Adopted Ecological Criteria			
Sample ID			
Depth (m bgl)			
Analyte	Date	Units	Result
NEPM 2013 EILs for Urban Residential / Public Open Space			
NEPM 2013 EILs for Commercial / Industrial			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil			
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil			

Stage 1

Legend

- Grab Sample
- Groundwater Monitoring Well
- Soil Bore
- Soil Vapour Sample
- Test Pit
- Validation Sample - Base
- Validation Sample - Wall
- Excavation
- Temporary Access Road
- Stage 1; Stage 2

Amended Development Landuse

- Main Audit Area (Medium to High Density Residential)
- Substation Audit Area
- RA11 Excavation
- RA2 Excavation
- Lot Boundary
- Lot 3 Young Street

Created:	M. Black	Date:	30/09/2024
Reviewed:	E. Cooke	Revision:	0
Approved:	M. Beasley	Scale:	1:300 (A3)
File:	S19142_049_F014c Soil Exceedances Ecological		

0 1.25 2.5 5 7.5 10 12.5 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 6f

Title: **Residual Soil Impacts Exceeding Ecological Criteria - Substation Audit Area**

Project: Stage 1 Remediation Validation Report

Location: 887 Bourke Street, Waterloo, NSW, AU

Client: Jeffman Pty Ltd

Path: \\Vic-fp-01\vic\01 Jobs\1.NSW Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_049_Stage 1 RVR.aprx

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Appendix B

Site audit documentation

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Excavation Surface Validation Remediation Excavation - RA2 REV 0 (Senversa, 02 July 2024)**
Final Report: **Excavation Surface Validation Remediation Excavation - RA2 REV 1 (Senversa, 16 September 2024)**

Comment no.	Location in Document	Auditor's comment	Date	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	22/07/2024	Updated in Revision 1 version.	28/08/2024	Closed	18/09/2024
2	Section 1.1/second bullet	'was removed and treated?' . Several instances of use of different tenses. Please be consistent, given this report is dated 02 July, the de-watering, the material segregagtion, the reinstatement of the material etc all happened in the past	22/07/2024	Fixed in Revision 1 version.	28/08/2024	Closed	18/09/2024
3	pg 7/4.4 northern wall	first sentence mentions southern wall	22/07/2024	Fixed in Revision 1 version.	28/08/2024	Closed	18/09/2024
4	pg 7/section 4.5	Can Senversa please expand on the statement around elevated PID readings recorded from RA2 base samples being attributed to moisture within clays?	22/07/2024	Text Updated	28/08/2024	Closed	18/09/2024
5	Table 5-1/pg 8	Comment re: TSP006 in second row of table appears to be incorrect	22/07/2024	Fixed to 'TSP006 and TSP007'.	28/08/2024	Closed	18/09/2024
6	Section 6.0/pg 9	Please update this section of the report based on the auditor's commentary of the revised RBSLs - refer to email from Andrew to Matt B (dated 15 July 2024) - also please update RBSLs screen criteria in lab summary tables.	22/07/2024	Updated in Revision 1 version.	28/08/2024	Closed	18/09/2024
7	QAQC tables	Some sample receipts state 'elevated' sample temperatures, eg Eurofins batch 1063402 (17.1 degrees C) - can you please include a discussion around sample temperatures recorded by the lab and discuss if this could impact on the useability of the dataset - particulalry with respect to VOCs	22/07/2024	Sample batches 1063402 and 1040348 were received at elevated temperatures, however attempt to chill was evident (ice bricks present). There is the potential for volatile loss and some volatile concentrations may be biased low. Added to Attachment D QAQC table in Revision 1.	28/08/2024	Closed	18/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Rev 0 (Draft) Report: **Excavation validation - Part of Lot 4 in DP 600884 (RA7, RA12 and Pedestrian Link. REV 0 (Senversa, 31 July 2024)**
Rev 1 (Final) Report Report: **Excavation validation - Part of Lot 4 in DP 600884 (RA7, RA12 and Pedestrian Link. REV 1 (Senversa, 13 September 2024)**

Comment no.	Location in Document	Auditor's comment	Date	Consultant Responses	Comment Dates	Auditor comment	Comment date
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	27/08/2024	Updated in Revision 1 version.	28/08/2024	Closed	16/09/2024
2	General	Parcel 1/Part Parcel 1 is referenced throughout the report but not defined, nor shown on figures. Please define part parcel 1/parcel 1 and preferably show this area on the figures	27/08/2024	Part Parcel 1 comprises the eastern section of Parcel 1. A new series of figures have been generated to define key areas referred to in the report (Part Parcel 1, northern half of pedastriank link, southern half of pedastrian link).	28/08/2024	Closed	16/09/2024
3	1.2.1/pg 1/final paragraph	re: *'for simplicity, the suitability of both the Parcel 1 and Pedestrian Link areas have been assessed for mixed medium high density residential and commercial land use'* - This statement contradicts the Validation Approach for the pedestrian link report, which mentions assessing Areas A + Area B against commercial/industrial criteria and then Area C against medium-high density residential use. In any case, Table 3.2 justifies HIL B exceedances by comparing the data to HIL D. McNally Managment has confirmed the required end use for each portion of the pedestrian link (via email correspondence dated 08/08/2024. Can the report please be updated based on this instruction?	27/08/2024	The last paragraph has been updated to note that Part Parcel 1 and the southern half of the pedastrian link will be assessed for mixed medium high density residential and commercial land use and the northern half of the pedastrian like will be assessed as a pedastrian link (per MM instruction). The new series of figures define the northern and southern halves of the pedastrian link, as well as the eastern portion of Parcel 1.	28/08/2024	Closed	16/09/2024
4	Figures	Once the above comment has been addressed, an exceedance figure should be presented in the report.	27/08/2024	Please refer to Figures 3 and 4 in the rev 1 report.		Closed	16/09/2024
5	1.3.1/pg 4	Please state if validation samples were collected from the base of the tank removal area, and where in the report these results are presented	27/08/2024	Text updated. Note this section is now 1.4.1 in Revision 1 document.	28/08/2024	Closed	16/09/2024
6	1.3.1/pg 4	Two USTs were noted in RA7 in the RWP/RVP, but only one was encountered? Can some wording be added to the report to this point?	27/08/2024	Upon excavation of RA7 it was identified that there was only 1 UST located in the area. Text added. Note this section is now 1.4.1 in Revision 1 document.	29/08/2024	Closed	16/09/2024
7	1.3.1/pg 4	5th bullet point states concrete slabs at RA7 were observed to be free from asbestos, yet the 13th bullet states extension of RA7 was driven by bonded ACM observed during slab removal etc. Please clarify.	27/08/2024	5th bullet is referring to slabs being free from ACM being adgered to the slab surface. 13th bullet is referring to ACM observed in soils underlying slabs. Text updated to clarify. Note this section is now 1.4.1 in Revision 1 document.	28/08/2024	Closed	16/09/2024
8	General	The report needs to include further detailed discussion around the asbestos finds in the Pedestrian Link. > there is minimal reference to the ACM noted later in the report - where was this encountered? Was it excavated and were validation samples collected from the base of the excavation in this area? > there is minimal reference to any asbestos that was encountered, but removed from the pedestrian link. Where was it encountered? In what form? in what condition? > there is no discussion on how asbestos %w/w were calculated for bonded ACM. > AF was reported in some lab samples, but no field visual observations recorded in test pit logs? Was material sieved onto contrasting colour sheets etc as per WA guidelines? - where is the record that this approach was adopted? > re: asbesto sieving - were any fragments retained in the sieve? or observed within sieved soil? How were the 500mL samples collected? > Senversa should also provide commentary with respect to the condition of any bonded ACM finds in terms of good/poor condition (as per NEPM) Has the ACM in photo 6 been removed from the site? and the base and walls of this area visually validated and sampled? For the majority of test pits where lab analysis identified the presence of AF/FA there is no record on the logs of visual observations of asbestos. Is it the case that asbestos was not observed in test pit walls/spoil, but was detected by the lab? Can this be clarified in the report.	27/08/2024	The following has been updated in the report - Initial observations of asbestos provided in (new Section 1.3), to provide better context to remediation works. - Observation made during remediation works regarding nature and extent of asbestos presented in New Sections 3.2.3 and 3.3.3. -Photo 6 text updated to note ACM was removed as part of remediation. - Regarding methodology, sampling and quantifiction conducted in accordance with VWP and WA DoH (2009) guidelines. This is updated in Table 2.2. This is includes the assumption of 15% of ACM comprising asbestos for the purpose of quanitifcation which is stated in the field AQ summary table (Table 3, Attachment D). This table also indicates whether fragments were retained during AQ. -Section 3.3.4 now highlight that asbestos detected by the lab at the extent of the excavation, but ACM was observed to be remaining. Its also noted that ACM was removed up to the eastern boundary of the pedastrian link, indicating that asbestos (ACM or fibres) may extend beneath the building footings of the neighbouring property.	28/08/2024	Closed	16/09/2024
9	Section 3.0/Table 3.1/pg 10/QAQC row	The report states, ' *on the basis of this assessment, the soil results are considered suitable for the purpose of interim assessment of the material to guide re-use*' - can this statement please be updated to align with the overall purpose of the report in particular the reference to interim assessment	27/08/2024	Text updated	28/08/2024	Closed	16/09/2024
10	General	Reference is made to Part lot 4 and lot 3 throughout, lot boundaries should be presented on figures	27/08/2024	Refer to updated series of Figures.	28/08/2024	Labelled lot boundaries have not been presented, however, in the context of other change sthe auditor is satisfied with the consultant response	16/09/2024
11	Table 2.2/pg 8	The RVP states that samples will also be tested for BTEX?	27/08/2024	Updated in Revision 1 version.	28/08/2024	Closed	16/09/2024
12	Figures	Can one of the figures be updated/new figure provided to show the area to which the geotextile has been applied. Can the location of the sewer pipe be presented on one of the figures	27/08/2024	Refer to new Figure 5. The location of the sewer main is also presented in Attachment H.	28/08/2024	Closed	16/09/2024
13	Table 2.2/pg 8/deviations from VWP/first	from the **base** of the excavation?	27/08/2024	Text updated.	28/08/2024	Closed	16/09/2024
14	Table 2.2/pg 8/deviations from	the report mentions that samples were collected between 2-3m bgl, but the figure only shows sample depth of max 2.0m?	27/08/2024	Where multiple sample depths collectedat a location , these are now presented in the updated figures.	28/08/2024	Closed	16/09/2024
15	Table 3.2/pg 12	Re: Sum of PAH exceedance of HIL B in sample RA7-W42-0.75 - comment provided states that value is <HIL D - but the auditor's understanding (as per the *Validation approach for the pedestrian link approach report)* is that this southern portion of the Pedestrian Link may potentially be developed for residential, so therefore, is a comment regarding <HIL D relevant for this exceedance? The report justifies exceedances of residential criteria in various locations including the eastern wall of the southern portion of the pedestrian link by stating that the values are <HIL D, however, the auditor's understanding (based on recent discussions with Senversa, Jeffman etc and based on the Validation approach for the pedestrian link approach report), that the southern portion of the Pedestrian Link should be assessed for potential mixed commercial/high density residential use.	27/08/2024	Comment removed and reference to HIL-D for the southern portion of the pedastrian link removed throughout. The main point for exceedances at the eastern wall of the excavation is that exceedances reported at the boundary are not considered representative of soils remaining on site in Stage 1. Exceedances reported at the interface of Stage 1 and Stage 2 will be identified and addressed within future Stage 2 remediation planning documentation including the Remediation Work Plan and Validation Work Plan.	28/08/2024	Closed	16/09/2024
16	Table 3.2 pg 13/human health inhalation row	The 'HSL-B - Asbestos (AF/FA)' exceedances in samples DSTP09-2.0 and 3.0 have not been commented on. Please provide comment or state the section in the report where the exceedance is discussed in more detail	27/08/2024	Further discussion is presented in Section 5.2. Comment has been added to Table 3.3 (table number corrected) in Revision 1 document.	29/08/2024	Closed	16/09/2024
17	Figures	Some sample locations on the figures (e.g. DSTP02, DSTP05, DSTP15, DSTP09) appear to be collected from eg 1-2m bgl, but the figure also shows that there is a concrete slab at 0.9m in this area?	27/08/2024	Figures updated to address this. The concrete footing depth ranged from 0.9 to 1.0 m bgl (i.e. there is typically minor variability in elevation of disturbed surfaces). Figure updated to reflect this.	28/08/2024	Closed	16/09/2024
19	Figures	Figure 1 - some of the hand augers in the north have test pit symbols (minor coment)	27/08/2024	Updated in Figures.	28/08/2024	Closed	16/09/2024
20	Figures	RA7-W4 not plotted on figure (just A, B, C)	27/08/2024	Updated in Figures.	28/08/2024	Closed	16/09/2024
21	Attachment D/ Table 1a	Should the soil results be compared to the B(a)P TEQ RBSL?	27/08/2024	Soil results are compared to the revised HIL/ESLs for B(a)P (refer to response to Item 37 further below)	28/08/2024	Closed	16/09/2024
22	Section 5.2	This section does not adequately discuss the FA/AF finds at the pedestrian link. There is an exceedance, is there potential that future works by Council will disturb this material? What are the data gaps in this area? (e.g. material behind the eastern batter slope = not investigated?).	27/08/2024	To be managed via passive LTEMP. Paragraph added to the end of this section.	29/08/2024	Closed	16/09/2024
23	General	Please include a statement in the report which clarifies if the staff conducting the asbestos investigations are considered to be a 'competent person' (in accordance with NEPM)	27/08/2024	Field asbestos quantification assessments were performed by an experienced environmental scientist in accordance with NEPM 2013. Comment added to Table 2.2 in Revision 1 document.	29/08/2024	Closed	16/09/2024
24	1.2.1 page 2	The conclusions section does not discuss the ecological exceedances within the pedestrian link. This needs to be closed out in the report.	27/08/2024	Exceedances of ecological criteria in the pedastrian link (northern portion) were limited to two samples reporting elevated zinc. As discussed in the report, exceedances reported at the boundary are not considered representative of soils remaining on site in Stage 1.	29/08/2024	Closed	16/09/2024
25		Are the exceedances within the wall samples considered to be on site or off-site? How will these exceedances be dealt with during Stage 2 remediation?	27/08/2024	It is noted in Section 5.1 exceedances reported at the boundary are not considered representative of soils remaining on site in Stage 1. A sentence has been added to note that exceedances reported at the interface of Stage 1 and Stage 2 will be identified and addressed within future Stage 2 remediation planning documentation including the Remediation Work Plan and Validation Work Plan.	28/08/2024	Closed	16/09/2024
26	Section 5.2/pg 18	Section 5.2 would benefit from a clear summary of the asbestos that was encountered within the Pedestrian Link, what was removed, and what remains and where and at what concentrations, including a disucssion regarding if remaining asbestos presents a health risk to future users of the area, and an opinion whether a management plan is required.	27/08/2024	Some additional discussion / subheaders added to Section 5.2.	28/08/2024	Closed	16/09/2024
27	Uncertainties	Depth of fill has not been confirmed in the northern extent of the pedestrian link. Why wasn't DSTP24 excavated to top of natural? Was fill consistent with other fill types in the PL? The small area north of the pedestrian link has been investigated with one shallow test pit and two shallow hand auger samples. What is the justfication for this area not being remediated? Is there evidence to show that this portion of the site has a different history to the remainder of the pedestrian link and is unlikely to contain asbestos (similar to that encountered within other portions of the pedestrian link)?	27/08/2024	DSTP24 was excavated to the top of the footing extending from the adjacent building located to the west. This is consistent with contraints noted for other sampling location adjacent to the western boundary. DSTP24 log updated to make this clear. The northern area comprised services and large tree roots. As noted in the report, the assessment supports a low risk of asbestos presence and the uncertainty is further mitigated by the proposed LTEMP. This has been updated in the uncertanties section.	28/08/2024	Closed	16/09/2024
28	Attachment D/QAQC table/Row 1	*'Duplicate sample frequency has generally been met'* - Can Senversa state how many dups/trips were collected and analysed, and were all dups/trips analysed for all the relevant analytes RPD exceedances have been noted - are these exceedances expected to impact on the useability of the data?	27/08/2024	The variability of duplicate pairs in soil is considered to be due to the heterogenous nature of the soils, which may have resulted in the variability observed in the laboratory results. Senversa considers this non-conformance to not impact the overall data integrity and reliability of the investigation. Eight soil duplicates and four soil triplicates were collected and analysed, this has been updated in Revision 1.	28/08/2024	Closed	16/09/2024
29	Attachment D/QAQC table/Row 2	RPDs in **X** pairs - please update are these exceedances expected to impact on the useability of the data?	27/08/2024	The variability of duplicate pairs in soil is considered to be due to the heterogenous nature of the soils, which may have resulted in the variability observed in the laboratory results. Senversa considers this non-conformance to not impact the overall data integrity and reliability of the investigation. Updated in Revision 1 version.	28/08/2024	Closed	16/09/2024
30	Attachment D/QAQC table/Row 4	Include statement on whether an acceptable number of TS/TB were collected (i.e. were 1 per batch/per day analysed?)	27/08/2024	Added to Revision 1 version.	28/08/2024	Closed	16/09/2024
31	Attachment D/QAQC table/Row 5	Senversa need to provide a statement with regards to holding time exceedance of 14 days and elevated sample temperatures. Could this affect the presence of contaminants and therefore conclusions in relation to validatoin suitability?	27/08/2024	Text updated	28/08/2024	Closed	16/09/2024
32	Lab summary tables	TPH management limits relating to a commercial/indsutrial setting are missing from the lab summary tables	27/08/2024	Updated in Table 1a	28/08/2024	Closed	16/09/2024
33	3.3.3/pg 14/western wall	Zinc exceedances have been noted, but what about Copper in RA7_W4 and C16-C34 in RA7_W17?	27/08/2024	Refer Section 3.2.4, this is presented within part Parcel 1 discussion.	28/08/2024	Closed	16/09/2024
34	3.3.3/pg 15/eastern wall	The health exceedances noted are in a portion of the pedestrian link which may require development for future residential land use, so the arguments presented by Senversa may not be relevant	27/08/2024	Text updated to remove this reference, and discuss statistical review only.	28/08/2024	Closed	16/09/2024
35	3.3.3/pg 15/base	re: HIL exceedance in base samples for lead and B(a)P, this portion of the site may be developed for residential purposes, so the justification provided for these exceedances (i.e. they are less than comm/ind) is not relevant.	27/08/2024	Text updated to remove this reference, and discuss statistical review only.	28/08/2024	Closed	16/09/2024
36	3.3.3/pg 15/base	re: *'generally in locations where the extent of fill was not removed (ie. northern portion of pedestrian link)* - there are no reported EIL exceedances for these analytes within base samples collected from the northern portion of pedestrian link?	27/08/2024	Text updated. Headers updated to better distinquish between southern and northern half of the pedastrian link.	28/08/2024	Closed	16/09/2024
37	Lab summary tables	Benzo(a)pyrene TEQ zero HIL presented is 70mg/kg (comm/ind) and 7mg/kg (Res B), but Table 1a(1) of the NEPM presents different values for B(a)P TEQ	27/08/2024	As outlined in the VWP (Section 6.1), the B(a)P screening values in ASC NEPM have been refined to reflect site conditions and exposures for ecological receptors and human health. The derivation of the modified ESL/HILs is presented in the HHRA and data gap DSI.	28/08/2024	Closed	16/09/2024
38	Lab summary tables	There are superscript notes in the lab summary tables, but no notes provided	27/08/2024	Superscripts were largely redundant have been removed	28/08/2024	Closed	16/09/2024
39	3.3.3/pg 15/base	Can a clear description of the 'northern portion of the pedestrian link' vs the 'Pedestrian Link - Northern Area' be provided. Ideally this would be shown clearly on a figure	27/08/2024	This section is referring to the portion of land located north of the excavation illustrated on Figure 3 and Figure 4 (i.e. where DSHA01, DSHA02 and DSTP24 are situated). Subheading has been updated to make this clearer too.	28/08/2024	Closed	16/09/2024
40	3.4/page 16	Opening paragraph says the area was 'not subject to excavation' but the figure shows that a portion of the area was excavated down to 2m bgl and concrete footings were encountered at 0.9m bgl.	27/08/2024	This section is referring to the portion of land located north of the excavation illustrated on Figure 3 and Figure 4 (i.e. where DSHA01, DSHA02 and DSTP24 are situated). Subheading has been updated to make this clearer too.	28/08/2024	Closed	16/09/2024
41	3.4/page 16/exceedances of criteria	Senversa has noted that SGC reduced TRH C10-C36 to 880mg/kg for sample DSHA02/0.1-0.2 but some wording should be added to conclude whether the SGC results represent an issue or not.	27/08/2024	Table 1b updated to include commercial industierla criteria only. No exceedances of commercia/industrial criteria to discuss.	28/08/2024	Closed	16/09/2024
42	5.0/page 17/3rd paragraph	re: '*there is a low likelihood of migration of these contaminants at the boundary onto the site.*' Can Senversa provide evidence to support this statement? Will the exceedances in the wall samples be removed as part of Stage 2 remediation?	27/08/2024	Some additional discussion added to Section 5.0, refer to final paragraph.	28/08/2024	Closed	16/09/2024
43	6.0/pg 20/conclusions	Can Senversa please provide justification to support no EMP for the pedestrian link (if this is what they propose). Or, alternatively recommend an EMP. It is the auditor's opinion that Council should be notified of the presence of ACM in the pedestrian link, but acknowledges that this material is not likely to be disturbed in the future use of this area.	27/08/2024	Conclusions updated	28/08/2024	Closed	16/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stage 1 Remediation Validation: Remediation Excavation RA11 and substation footprint. REV 0 (Senversa, 17 August 2024)**
Final Report: **Stage 1 Remediation Validation: Remediation Excavation RA11 and substation footprint. REV 1 (Senversa, 17 September 2024)**

Comment no.	Location in Document	Auditor's comment	Date	Consultant Responses	Comment Dates	Auditor's comment	Date
1	Introduction/pg 1	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	27/08/2024	Updated in Revision 1 version.	16/09/2024	Closed	18/09/2024
2	Introduction/pg 1	*'it is also noted that the southern portion of RA11 extends into RA2, which has been ____ and documented separately'.* Incomplete sentence - please update	27/08/2024	Updated in Revision 1 version.	16/09/2024	Closed	18/09/2024
3	Table 3.2/sampling method	'to 1.5m bgl and Botany Sands' - can you update this sentence - not sure what this means?	27/08/2024	Updated in Revision 1 version.	16/09/2024	Closed	18/09/2024
4	General	Page numbers are missing from footers	27/08/2024	Added to Revision 1 version.	16/09/2024	Closed	18/09/2024
5	Table 3.3/substation row/evaluation colum	*'this also provides allows assessment'* - please update sentence	27/08/2024	Updated in Revision 1 version.	16/09/2024	Closed	18/09/2024
6	Table 3.3/RA11 row/deviation from VWP c	*'Survey of the excavation was not undertaken of the final excavation footprint'* - please update	27/08/2024	Updated in Revision 1 version.	16/09/2024	Closed	18/09/2024
7	6.0 Interim assessment of risk	No commentary provided on asbestos risk within substation. + exclusion zone	27/08/2024	Text updated in Section 6.0	16/09/2024	Closed	18/09/2024
8	Lab summary tables	Asbestos data presented as series of '1s' and '0's' with no legend - please update	27/08/2024	Table 1 and Table 2 are updated in Revision 1 version.	16/09/2024	Closed	18/09/2024
9	Lab summary table	The ESLs for B(a)P in the lab summary tables are incorrect. The ESL for all scenarios for B(a)P is 0.7mg/kg. The HSLs stated (33mg/kg and 170mg/kg) appear to be related to the CRC Care tech note no. 39. But should the 170mg/kg reference be 172mg/kg?	27/08/2024	As outlined in the VWP (Section 6.1), the B(a)P and B(a)P TEQ criteria in ASC NEPM have been refined to reflect more recent toxicolgical data and site-specific setting for ecological receptors and human health. The derivation of the modified ESL/HILs is presented in the HHRA and data gap DSI. The criteria values in the tables have been checked and updated where required.	16/09/2024	Closed	18/09/2024
10	Lab summary table	Was there any SGC analysis carried out on the TRH exceedances?	27/08/2024	No. We don't consider this to impact the assessment on the basis that: - Location RA11-W3 also exceeds criteria for B(a)P, so SGC analysis would not change the outcome for this location. This sample location is also at the extent of the RA11 excavation and relevant moreso to the substation exclusion zone which is not being considered for high density residential/commercial. -Location W15 is at the extent of the substation exclusion zone which is not being consider for high density residential/commercial.	16/09/2024	Closed	18/09/2024
11		Do the elevated PAH results noted in W3 correlate with observations of slag at this location? If so, the slag could be the source of the elevated PAHs in this sample?	27/08/2024	It is considdered likely that slag is the source of elevated PAHs and hydrocabons in this sample and these impacts are bound up in the slag matrix and of low bioavailability. In anycase this sample location is at the extent of the RA11 excavation and is relevant to characterisation of the substation exclusion zone, which is not being considered for high density residential/commercial.	16/09/2024	Closed	18/09/2024
12	Site photographs	Are there any photographs of RA11 looking in a SE direction? (i.e. toward RA2)?	27/08/2024	Refer to Photo 9, now added to photolog.	16/09/2024	Closed	18/09/2024
13	Attachment J/excavation validation sectio	It appears that some of the statistical analysis has been completed using results solely collected from RA11, but from a site wide perspective, there is nothing that distinguishes RA11 as a distinct population at the site. The statistical analysis should therefore consider the entire site, i.e. areas of shared history etc.	27/08/2024	It was considered relevant to solely assess RA11 data as an interim statistical assessment given that the original driver for RA11 was slag impacted fill that was distinquishable from other fill encountered at the site. The final RVR considers statistical data holistically for the site.	16/09/2024	Closed	18/09/2024
14	Lab summary tables	Superscript numbers are presented in the lab summary tables, however there is no legend explaing their meaning	27/08/2024	Added to Table 1, Table 2 and Table 3 in Revision 1 version.	16/09/2024	Closed	18/09/2024
15	Lab summary tables	missing asbestos criteria in lab summary tables	27/08/2024	This has now been added.	16/09/2024	Closed	18/09/2024
16	Section 7.0 conclusions	*'the soils within the substation are considered suitable for ongoing use as a substation under the current configuration '* . One of the PCoC identified for the substation/exclusion zone is asbestos, but limited asbestos sampling has been completed from NDD samples within the exclusion zone. Are there any other lines of evidence that could be used to support that the substation is suitable for comm/ind use taking into account that it has been used as a substation for quite some time and the restrictions in conducting sub surface works in these areas?	27/08/2024	Some additional discussion added to Section 6.0	16/09/2024	Closed	18/09/2024
17	QAQC section	Where deviations from the QA/QC criteria have been reported (eg not enough duplicate samples collected), please provide further commentary re: useability of data in the context of this omission.	27/08/2024	Additional text added.	16/09/2024	Closed	18/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Imported material assessment: Virgin Excavated Natural Material, 2-10 Bay Street, Double Bay, NSW REV 0 (Senversa, 21 June 2024)**
Final Report: **Imported material assessment: Virgin Excavated Natural Material, 2-10 Bay Street, Double Bay, NSW REV 1 (Senversa, 27 June 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Date
1	Table 4.1/pg 6/first row	It is noted that the report states that there were PFAS concentrations detected above laboratory LOR but the appended lab summary tables and lab reports don't appear to support this. Is this a typo?	24/06/2024	Senversa acknowledge that tbis was a typo and re-issued a new version of the report which addressed the typo.	27/06/2024	Closed	20/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Imported material assessment: Virgin Excavated Natural Material: 26-42, Eden Street, ARNECLIFFE. REV 0. (Senversa 08 July 2024)**
Final Report: **Imported material assessment: Virgin Excavated Natural Material: 26-42, Eden Street, ARNECLIFFE. REV 1. (Senversa 17 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Date
1	Table A/pdf pg 84	Asbestos results are presented as a series of 1s and 0s with no legend entry provided to define what the 1s and 0s mean. Please either update table or add legend entries	10/07/2024	Updated in Revision 2 version.	28/08/2024	Closed	20/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Imported material assessment: MULCH. REV 0. (Senversa 08 July 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Date
1		Toxaphene detected just above LOR - this appears unusual given a cursory internet search does not indicate it was used in australia?	3/09/2024	The ANZG 2018 notes toxaphene has been used extensively as a cotton insecticide, often in conjunction with DDT. Given that there is a freshwater DGV for toxaphene, and a HIL in ASC NEPM, the presence of toxaphene may be uncommon but not unheard of	29/08/2024	Closed	20/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Imported material assessment: Hanson Bass point quarry quarried products. REV 0 (Senversa 09 July 2024)**
Report: **Imported material assessment: Hanson Bass point quarry quarried products. REV 1 (Senversa 17 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Date
1	Table 4.1/pg 3/row 3	eth MTS? - typo? (minor comment)	3/09/2024	Fixed to 'the Material Test Report'	29/08/2024	Closed	20/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Imported material assessment: Virgin Excavated Natural Material, 2-10 Darling Drive, Sydney, NSW. REV 0 (Senversa, 19 July 2024)**
Final Report: **Imported material assessment: Virgin Excavated Natural Material, 2-10 Darling Drive, Sydney, NSW. REV 1 (Senversa, 17 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Date
1	Summary tables	Asbestos not presented in summary tables	3/09/2024	Asbestos results added to Revision 1 version.	28/08/2024	Closed	20/09/2024
2		Please provide justification for the adopted sampling suite	3/09/2024	The analytical suite was as per the VWP for 'Imported VENM or material subject to an NSW EPA Resource Rescovery Order/Exemption'	29/08/2024	Closed	20/09/2024

Instructions for addressing auditor comments
Please provide your response to each auditor comment within the 'consultant response column', Once all comments are addressed. Please provide an updated revision of the report in .pdf and a .doc/.pdf version with track changes shown

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP001 REV 0 (Senversa 22 September 2023)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP001 REV 1 (Senversa 3September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	General	Stage 1 comprises **Part of** Lot 4 and **Part of** Lot 3. Please update all reports. **This comment applies to all reports.**	1/08/2024	Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024
2	Section 2/pg 2	Stockpile volume estimated at 350m^3, stockpile dimensions add up to 345m^3 and estimated final volume is 988m^3. Can you please provide the actual estimated volume of SP001? **This comment applies to all reports.**	1/08/2024	Stockpile volume has been updated.	2/09/2024	Closed	9/09/2024
3	Section 2/pg 2 /sampling method	Update sampling design guidelines reference from 1995 to 2022 version	1/08/2024	Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024
4	Section 2/pg 2 /sampling method	The report states that the stockpile is 1.7m x 11m x 1.85m and the report also states that samples were collected from 0.3m below the surface. Can you please provide justification within the report as to whether samples collected from 0.3m are likely to be representative of the stockpile. **This comment applies to all reports.**	1/08/2024	Sampling has been undertaken in accordance with the auditor approved VWP. The material was observed to be homogenous in nature and on this basis, this sampling approach is considered appropriate. Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024
5	Section 2/pg 2 /primary sample collected	Please provide justification for the number of samples collected? NSW EPA (2022) Sampling design guidelines state that 'Stockpiles of material that require waste classification for disposal or transport to a recycling facility must be sampled in accordance with the minimum number of samples outlined in Table 3 and Table 4' (Section 5.4.6). **This comment applies to all reports.**	1/08/2024	As stated in the auditor approved VWP, stockpiles <200 m^3 were to have 1 primary sample per 25 m^3 and stockpiles >200 to 2500 m^3 require a minimum of 10 samples. Which is considered to provide an adequate assessment of fill quality. The material was observed to be homogenous in nature and on this basis, this sampling approach is considered appropriate.	2/09/2024	Closed	9/09/2024
6	Section 2/pg 2 /sample analysis	The waste classification guidelines state that, 'Generators of waste must select the chemical contaminants that are known to be present, or are likely to be present in the waste. This may be informed by the site activities, site history, or the processes which produced the waste. Generators of waste must be able to justify the chemical contaminants selected for testing and keep records of that decision for three years.' Please can you provide a couple of sentences within the report which justify the selection of tested analytes (noting that the receiving landfill will not have access to the RAP/VWP/RWP). **This comment applies to all reports.**	1/08/2024	A sentence pertaining to the site history has been added to Section 1. CoPCs previously identified for the RA the material originated from has been added to Table 2.1.	2/09/2024	Closed	9/09/2024
7	Figure 1	The figure is called 'stockpile location' but where is the stockpile location? Is the red polygon the source of the material? Or just the temporary storage location of the stockpile? Please update the figure for clarity. **This comment applies to all reports.**	1/08/2024	Updated to add in "Temporary stockpile location" in the legend. The source area is RA2- as noted in the report.	2/09/2024	Closed	9/09/2024
8	Sample receipts	Please clarify why there is no sample temperature reported on the Eurofins sample receipt? Also, please provide commentary within Table D1 (sample preservation) with regards to sample temps reported on the ALS sample receipt. do tempertures >6 degrees C (if present) impact the useability of the data? **This comment applies to all reports.**	1/08/2024	Sample temperatures were received within the acceptable temperature range (<6°C) and initial temperatures when received at the lab are reported on the COC documents. Temperatures of the samples at the secondary lab were reported >6°C; however, an attempt to chill was evident (ice bricks present) therefore it is not considered to impact the useability of the data. Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP002 REV 0 (Senversa 20 September 2023)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP002 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	General	Stage 1 comprises **Part of** Lot 4 and **Part of** Lot 5. Please update all reports.	1/08/2024	Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP004 REV 0 (Senversa 15 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP004 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 1/summary	Assuming 2 x **5**2 x 1 is a typo? Please update report	1/08/2024	Fixed in Revision 1 version.	2/09/2024	Closed	9/09/2024
2	Section 2/pg 2	Section 2 states that 7 primary samples were collected and analysed. Primary sample IDs are provided for samples taken on 27/09/23 (P_SP004-S001 to P_SP004-S003) and 3/04/24 (SP004_S001 to SP004_S004). What does the P mean on the sample IDs from 27/9/24? This does not match what was on the COC, lab results or results tables. There's no explaination as to why these IDs are different or were changed.	1/08/2024	The P was a technical mistake that resulted from coding being run. It is fixed in Revision 1 version.	2/09/2024	Closed	9/09/2024
3	Section 2/pg 2	SP004_S005 is not included on the list of primary sample IDs or the list of sample analysis.	1/08/2024	Fixed in Revision 1 version.	2/09/2024	Closed	9/09/2024
4	Section 2/pg2/QC samples collected	Please provide justification for why no rinsate was collected on 3/04/2024. Sampling method states a hand drill was used to crush materials, was this used for the April sampling? If not, please specify that.	1/08/2024	The hand drill was not used in the April sampling, updated in Table D-1 of Revision 1 version.	2/09/2024	Closed	9/09/2024
5	Figure 1	The figure only shows 3 sample locations, section 2 states 7 primary samples were collected and analysed. Should there be 2 figures for the 2 sampling events?	1/08/2024	Two separate figures made for SP004. Initally three samples were collected in Septeber 2023 (Figure 1). The stockpile was then moved around and an additional five samples were collected in April 2024 (Figure 2).	2/09/2024	Closed	9/09/2024
6	Section 2/pg 2 /sampling method	The report states that the origin of the material was 0.1-0.4 mbgl, but does not specify from what depth the samples were collected from the stockpile, nor is it given in the results tables. Can you please provide this information somewhere and provide justification as to whether samples taken from that depth are likely to be representative of the stockpile?	1/08/2024	Sample depth collection (0.3 m bgl) updated in Revision 1 version. Samples were collected at a conservative sample density of 8 samples per 4 m^3, which is considered to provide an adequate assessment of fill quality. The material was observed to be homogenous in nature and on this basis, this sampling approach is considered appropriate.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP006 REV 0 (Senversa 20 February 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP006 REV 2 (Senversa 02 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Figure 1	Sample IDs on the figure do not match sample IDs provided elsewhere in the report. Please make these match or provide justification for why they are different.	1/08/2024	Updated in revision 1 version	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment C/pg 6	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Fixed in Table A.	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment D/Sample Preservation Handling and Holding Times	The temperature provided by the lab was 7.9°C, above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	The samples were received with attempt to chill evident (ice bricks present); however, were marginally above the accepted temperature of 6°C recommended for volatile organic compounds. Therefore, there is the potential for volatile loss and some volatile concentrations may be biased low. Updated in Table D-1, Revision 1 version.	2/09/2024	The auditor notes that Senversa has included a statement stating that because of slightly elevated sample temperatures there is a potential for volatile loss and some compounds may be bias low. Senversa need to state whether this impacts the useability of the data or not? Could Senversa reference trip spike results to support this discussion?	9/09/2024	Trip spike recoveries were acceptable. On balance, Senversa considers that this deviation is acceptable and does not impact the useability of the data for its intended purpose. Updated in report.	26/09/2024	Closed	14/10/2024
-	-	-	-	-	-	Minor comment, but if addressing the above please correct spelling mistake in report tittle ('Wase'.	9/09/2024	Corrected	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP007 REV 0 (Senversa 3 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP007 REV 2 (Senversa 02 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 1/summary	Stockpile visual estimate was 140m3. The stockpile dimensions (8.5m x 7.9m x 1.8m) equal 121 m3. Please provide the actual estimated volume of SP007.	1/08/2024	Stockpile volume fixed in Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment C/pg 7	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Fixed in Table A.	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment D	Trip spike results are not tabulated	1/08/2024	Added in Attachment D as Table D3.	2/09/2024	Closed	9/09/2024			-	-
4	Attachment D	Attachment D is missing the QA/QC discussion, it only contains the TB result table. Please provide these.	1/08/2024	Attachment D added to Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
5	Attachment D/Sample Preservation Handling and Holding Times	The temperature provided by the lab was 7.9°C, above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	Added to Table D-1, Revision 1 version.	2/09/2024	The auditor notes that Senversa has included a statement stating that because of slightly elevated sample temperatures there is a potential for volatile loss and some compounds may be bias low. Senversa need to state whether this impacts the useability of the data or not? Could Senversa reference trip spike results to support this discussion?	9/09/2024	Trip spike recoveries were acceptable. On balance, Senversa considers that this deviation is acceptable and does not impact the useability of the data for its intended purpose. Updated in report.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP010 and SP021 REV 1 (Senversa 5 February 2023)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP010 and SP021 REV 2 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Sample analysis	Samples from SP001 are included in this list and shouldnt be	1/08/2024	Fixed in Revision 2 version.	2/09/2024	Closed	9/09/2024
2	Attachment C/pg 7	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Fixed in Table Attachment C, Table C1.	2/09/2024	Closed	9/09/2024
3	Attachment D/pg 2/Laboratory QC Analysis	No commentary has been provided for the three laboratory duplicate failures in report 1061292 for SP021. Three samples failed the lab duplicate criteria but passes the Eurofins QC Acceptance Criteria. This should be noted in the QC section with an explanation about whether or not this affects the validity of the data. See waste class for SP057 for example.	1/08/2024	Added to Table D-1, Revision 2 version.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP017 REV 0 (Senversa 15 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP017 REV 2 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment C/Table X	Asbestos is not included as an analtyte on the the result tables but was tested by the lab. Please include.	1/08/2024	Added to Attachment C, Table A.	2/09/2024	Asbestos is included under the Solvents results + no criteria presented for asbestos.	9/09/2024	Corrected in report.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP018 REV 0 (Senversa 3 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP018 REV 2 (Senversa 02 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Origin	The RA location where the spoil originated is not specified, only says "on-site in Lot 3....and Lot 4". Please specify.	1/08/2024	Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment C/pg 4	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Fixed in Attachment C, Table C1.	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment D/ pg 1/Soil Trip Blank Sampling and Analysis	The following two statements are conflicting, which is true? "No trip blanks were prepared or analysed in report 1071023" and "Analysed trip blank results were within the acceptable range." Results for TB are provided in Table D1	1/08/2024	Fixed in Attachment Table D-1, Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
4	Attachment D/ pg 1/Soil Trip Spike Sampling and Analysis	The following two statements are conflicting, which is true? '"No trip spike were prepared or analysed in report 1071023" and "Analysed trip spike results were within the acceptable range". Results for TS are provided in Table D2.	1/08/2024	Fixed in Attachment Table D-1, Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
5	Attachment D/Sample Preservation Handling and Holding Times	The temperature provided by the lab was 7.9°C, above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	The samples were received with attempt to chill evident (ice bricks present); however, were marginally above the accepted temperature of 6°C recommended for volatile organic compounds. Therefore, there is the potential for volatile loss and some volatile concentrations may be biased low. Updated in Revision 1 version.	2/09/2024	The auditor notes that Senversa has included a statement stating that because of slightly elevated sample temperatures there is a potential for volatile loss and some compounds may be bias low. Senversa need to state whether this impacts the useability of the data or not? Could Senversa reference trip spike results to support this discussion?	9/09/2024	Trip spike recoveries were acceptable. On balance, Senversa considers that this deviation is acceptable and does not impact the useability of the data for its intended purpose. Updated in report.	26/09/2024	Closed	14/10/2024
6	Attachment D/Sample Preservation Handling and Holding Times	There is one 4 day holding time exceedance for EN60Z: ASLP Leachate - ZHE in samples S006-S010 (ALS report ES2406963). Please provide commentary on whether or not this affects the validity of the data.	1/08/2024	This non-conformance is due to the very short holding time for the analytes and that the holding time breach is related to the forwarding of samples to the secondary laboratory by the primary laboratory. This minor non-conformance is not considered to affect the outcomes of this investigation. Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
7	Attachment D/pg 2/Laboratory QC Analysis	**1066642-S** - There are four lab duplicate failures in this lab report that are not commented on. They passed the Eurofins QC Acceptance Criteria but still need a comment on whether or not it impacts the outcomes of the assessment. See SP057 for example.	1/08/2024	Added to Table D-1, Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
8	Attachment D/pg 2/Laboratory QC Analysis	**1072013-S** - There is one lab duplicate failure in this lab report that is not commented on. It passed the Eurofins QC Acceptance Criteria but still needs a comment on whether or not it impacts the outcomes of the assessment. See SP057 for example.	1/08/2024	Added to Table D-1, Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
9	Attachment D/pg 2/Laboratory QC Analysis	**1076669-S** - There is one lab duplicate failure in this lab report that is not commented on. It passed the Eurofins QC Acceptance Criteria but still needs a comment on whether or not it impacts the outcomes of the assessment. See SP057 for example.	1/08/2024	Added to Table D-1, Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP032 REV 0 (Senversa 3 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP032 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Origin	The RA location where the spoil originated is not specified, only says "on-site in Lot 3....and Lot 4". Please specify.	1/08/2024	Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment D	The QA/QC discussion is missing from Attachment D, as are the results of the TS. Please provide these.	1/08/2024	Added to Revision 1 version. TS results added to Attachment D, Table D3.	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment D	Please clarify why there is no sample temperature reported on the ALS sample receipt? Also, please provide commentary within Att D with regards to sample temps - do these temps effect the useability of the data?	1/08/2024	All samples were received within the accepted temperature of <6°C, or a sample holding time breach would have been recorded on the ALS sample receipt. Sample temperature commentary in Table D-1, Revision 1 version.	2/09/2024	Sample receipt is missing please provide	9/09/2024	Added to report	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP033 REV 0 (Senversa 3 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP033 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment C/pg 6	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Updated in Attachment C, Table 1.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP035 REV 0 (Senversa 15 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP035 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Origin	The RA location where the spoil originated is not specified, only says "on-site in Lot 3....and Lot 4". Please specify.	1/08/2024	Location is specified as between the first and second slab in Parcel 1.	2/09/2024	Closed	9/09/2024
2	Attachment C/Table 1	Asbestos is not included as an analyte on the the result tables but was tested by the lab. Please include.	1/08/2024	Asbestos results added to Attachment C, Table 1.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP038 REV 0 (Senversa 15 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP038 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment C/pg 5	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Updated in Attachment C, Table 1.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP040 REV 0 (Senversa 15 April 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP040 REV 2 (Senversa 02 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Origin	The RA location where the spoil originated is not specified, only says "on-site in Lot 3...and Lot 4". Please specify.	1/08/2024	Origin of material is reported to come from the southwest corner of Parcel 1.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment C/pg 7	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Updated in Attachment C, Table 1.	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment D/Sample Preservation Handling and Holding Times	The temperature provided by the lab was 9.9°C, above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	The samples were received with attempt to chill evident (ice bricks present); however, were marginally above the accepted temperature of 6°C recommended for volatile organic compounds. Therefore, there is the potential for volatile loss and some volatile concentrations may be biased low. Updated in Revision 1 version.	2/09/2024	The auditor notes that Senversa has included a statement stating that because of slightly elevated sample temperatures there is a potential for volatile loss and some compounds may be bias low. Senversa need to state whether this impacts the useability of the data or not? Could Senversa reference trip spike results to support this discussion?	9/09/2024	Trip spike recoveries were acceptable. On balance, Senversa considers that this deviation is acceptable and does not impact the useability of the data for its intended purpose. Updated in report.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP043 REV 0 (Senversa 6 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP043 REV 2 (Senversa 02 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/Stockpile volume/pg 2	Stockpile volume estimated at 350m^3, stockpile dimensions (29m x 9m x 1.7m) add up to 444m^3. Can you please provide the actual estimated volume of SP043?	1/08/2024	Taking into consideration the missing material from the slopes of the stockpile, 350 m^3 is a conservative estimation.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment A/Figure 1	Sample SP043-S003 is not on the figure, please update	1/08/2024	Updated in the revision 1 version	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment C/pg 6	Please provide an explanation of what '1' means under the Asbestos Reported Result	1/08/2024	Updated in Attachment B, Table 1.	2/09/2024	Closed	9/09/2024	-	-	-	-
4	Attachment C	There are no results tables for the trip spike or trip blank, please provide	1/08/2024	Results are provided in Attachment C, Table D1 and D2.	2/09/2024	Closed	9/09/2024	-	-	-	-
5	Attachment D/Sample Preservation Handling and Holding Times	The temperature provided by the lab was 8.4°C, above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	The samples were received with attempt to chill evident (ice bricks present); however, were marginally above the accepted temperature of 6°C recommended for volatile organic compounds. Therefore, there is the potential for volatile loss and some volatile concentrations may be biased low. Updated in Revision 1 version.	2/09/2024	The auditor notes that Senversa has included a statement stating that because of slightly elevated sample temperatures there is a potential for volatile loss and some compounds may be bias low. Senversa need to state whether this impacts the useability of the data or not? Could Senversa reference trip spike results to support this discussion?	9/09/2024	Trip spike recoveries were acceptable. On balance, Senversa considers that this deviation is acceptable and does not impact the useability of the data for its intended purpose. Updated in report.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP047 REV 0 (Senversa 7 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP047 REV 2 (Senversa 02 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment C	Asbestos is not included as an analyte on the the result tables but was tested by the lab. Please include.	1/08/2024	Added to Attachment C, Table 1.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment D/Sample Preservation Handling and Holding Times	The temperature recorded by the lab was 26.3°C and the lab noted that no attempt to chill was evident. This is well above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	Updated in Table D-1, Revision 1 version. Unlikely to impact the validity of the results as the trip spike results indicated very little loss of volatiles on the journey to the lab.	2/09/2024	Not closed. See below comment.	9/09/2024	-	-	-	-
3	-	-	-	-	-	Section 2 lists two QC samples - QC363 (Trip Blank) and QC463 (Trip Spike). The COC also lists these two samples. But, the Eurofins receipt summary lists QC469 instead of QC463. Table D2 (TB) and D2 (TS) both provide results for the same sample, QC469, and lists it at a Trip Blank. Please clarify this. The above comment can't be closed out with the QC results tables provided.	9/09/2024	The QC attachment in bothreports have been updated to clarify that QC363 and QC463 were shared between SP047 and SP048. The labellling of QC463 as QC469 is an error on the Eurofins receipt. The laboratory has reissued receipt summary Table D2 (TB) has been edited to QC463. Table D3 (TB) has been edited to D3 (TS). The labelling of QC363 as QC369 and data input appears have been a mistake. This has now been corrected.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP048 REV 0 (Senversa 7 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP048 REV 2 (Senversa 2 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Origin	The RA location where the spoil originated is not specified, only says "from north-east of Parcel 1". Please specify.	1/08/2024	The material originated from screened material from Parcel 1 (north east) which is located outside the remediation areas, outside the VWP. Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment C	Asbestos is not included as an analyte on the the result tables but was tested by the lab. Please include.	1/08/2024	Added to Table 1, Attachment C.	2/09/2024	Closed	9/09/2024	-	-	-	-
3	Attachment D/Sample Preservation Handling and Holding Times	The temperature recorded by the lab was 26.8°C and the lab noted that no attempt to chill was evident. This is well above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	Updated in Table D-1, Revision 1 version. Unlikely to impact the validity of the results as the trip spike results indicated very little loss of volatiles on the journey to the lab.	2/09/2024	Not closed. See below comment.	9/09/2024	-	-	-	-
4	-	-	-	-	-	Section 2 lists two QC samples - QC363 (Trip Blank) and QC463 (Trip Spike). The COC also lists these two samples. These are the same sample IDs as SP047. The COC is also labelled as SP047 despite having samples for SP048 in it. SP047 and SP048 were both sampled on the same day, were the trip blank and spike samples shared between the stockpiles? If so, this needs to be stated somewhere in both reports. But, the Eurofins receipt summary lists QC469 instead of QC463. Table D2 (TB) has results for QC469. Table D3 (TB) has results for QC369. Where have these results come from? They're not in the lab reports or in SP047. Comment left by lab "We received 1 sample QC363 and QC463 to share with 3 different COC. Please advise." Was this addressed?	9/09/2024	updated to clarify that QC363 and QC463 were shared between SP047 and SP048. The labellling of QC463 as QC469 is an error on the Eurofins receipt. The laboratory has reissued receipt summary Table D2 (TB) has been edited to QC463. Table D3 (TB) has been edited to D3 (TS). The labelling of QC363 as QC369 and data input appears have been a mistake. This has now been corrected.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP051 REV 0 (Senversa 29 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP051 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2/Origin	The RA location where the spoil originated is not specified, only says "from driveway and Parcel 1". Please specify.	1/08/2024	The material originated from post screening at Parcel 1 and south of driveway which is located outside the remediation areas, outside the VWP. Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024
2	Attachment C	Asbestos is not included as an analyte on the the result tables but was tested by the lab. Please include.	1/08/2024	Added to Table 1, Attachment C.	2/09/2024	Closed	9/09/2024
3	Attachment D/pg 2/Laboratory QC Analysis	1101280-L - There is one lab duplicate failure in this lab report that is not commented on. It passed the Eurofins QC Acceptance Criteria but still needs a comment on whether or not it impacts the outcomes of the assessment. See SP057 for example.	1/08/2024	Updated in Table D-1, Revision 1 version.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP052 REV 0 (Senversa 28 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP052 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1		Duplicate sample QC176 is not listed in the QC samples analysed	1/08/2024	Added to Revision 1 version.	2/09/2024	Closed	9/09/2024
2	Attachment C	Asbestos is not included as an analyte on the the result tables but was tested by the lab. Please include.	1/08/2024	Added to Attachment C, Table A.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP054 REV 0 (Senversa 28 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP054 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment C/Table X/pg 8	Please provide an explanation of what '1' means under the Asbestos Reported Result.	1/08/2024	Fixed in Attachment C, Table A.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP055 REV 0 (Senversa 29 May 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP055 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1		Stockpile volume estimated at 70m^3, stockpile dimensions (5m x 6m x 2m) add up to 60m^3. Can you please provide the actual estimated volume of SP055?	1/08/2024	Fixed in Revision 1 version.	2/09/2024	Closed	9/09/2024
2	Attachment C	Asbestos is not included as an analyte on the the result tables but was tested by the lab.	1/08/2024	Added to Attachment C, Table A.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP057 REV 0 (Senversa 26 June 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP057 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Section 2/pg 2	Section 2 states 9 primary samples were collected and analysed, and only 9 samples are reported in the results tables. But within Section 2, samples S001 to S010 were analysed, the figure has 10 locations on it and the COC has 10 samples on it. Please confirm how many samples were collected and how many were analysed?	1/08/2024	Ten primary samples were collected however only nine were analysed for the full suite, sample S010 was analysed for asbestos only. This has been fixed in the Revision 1 version and asbestos results for S010 added to the table.	2/09/2024	Closed	9/09/2024
2	Attachment D	The trip spike results table is not provided.	1/08/2024	Added into Attachment D.	2/09/2024	Closed	9/09/2024
3	Attachment C/Table A/pg 8	Please provide an explanation of what '1' means under the Asbestos Reported Result.	1/08/2024	Fixed in Attachment C, Table A.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP056 REV 0 (Senversa 19 July 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP056 REV 2 (Senversa 2 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment D/Laboratory QC Analysis	**1100949-S-V2** - Provide more commentary on the sample that did not pass the Eurofins QC Acceptance Criteria and why it is not considered to impact the outcome of the assessment	1/08/2024	Eurofins indicated that sample heterogenity was the cause after further analysis. While care was taken to minimise the heterogeneity when splitting sample into duplicates, complete homogeneity cannot be achieved due to the inherent variability of soils. Senversa considers as there was only one RPD exceedance fail reported, the overall data integrity and reliability were not affected. Updated in Revision 1 version.	2/09/2024	Closed	9/09/2024	-	-	-	-
2	Attachment D/Sample Preservation Handling and Holding Times	The temperature recorded by the lab was 12.8°C. This is above the recommended value of 6°C for SVOC, VOC, and metals. Please provide some words on whether this is likely to impact the validity or representativeness of the analytical data.	1/08/2024	The samples were received with attempt to chill evident (ice bricks present); however, were marginally above the accepted temperature of 6°C recommended for volatile organic compounds. Therefore, there is the potential for volatile loss and some volatile concentrations may be biased low. Updated in Revision 1 version.	2/09/2024	The auditor notes that Senversa has included a statement stating that because of slightly elevated sample temperatures there is a potential for volatile loss and some compounds may be bias low. Senversa need to state whether this impacts the useability of the data or not? Could Senversa reference trip spike results to support this discussion?	9/09/2024	Trip spike recoveries were acceptable. On balance, Senversa considers that this deviation is acceptable and does not impact the useability of the data for its intended purpose. Updated in report.	26/09/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP062 REV 0 (Senversa 19 July 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP062 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment D	Results tables for TS and TB are missing, please provide.	1/08/2024	Result tables for TS and TB added.	2/09/2024	Closed	9/09/2024
2	Attachment D/pg 2/Laboratory QC Analysis	**1115245**: 'There are seven lab duplicate fails in this report, and only 6 are commented on. (**1115245-L**: Nickel (110%); **1115245-S**: Anthacene (120%), Chrysene (61%), Fluoranthene (87%), Phenanthrene (120%), Pyrene (97%), Cadmium (98%))	1/08/2024	Fixed in Revision 1 version.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP039, SP060 and SP061 REV 0 (Senversa 23 July 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP039, SP060 and SP061 REV 1 (Senversa 3 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	Attachment D	Results tables for TS are missing, please provide.	1/08/2024	Added into Attachment D.	2/09/2024	Closed	9/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Waste Classification Letter - Stockpile Assessment - SP068 REV 0 (Senversa 24 July 2024)**
Final Report: **Waste Classification Letter - Stockpile Assessment - SP068 REV 1 (Senversa 03 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Date	Consultant Responses	Comment Date	Auditor's comment	Comment Date
1	General	Stage 1 comprises Part of Lot 4 and **Part of** Lot 3. This report says part of Lot 4 and Lot 3, please update.	20/09/2024	Updated	3/10/2024	Closed	14/10/2024
2	Section 2/pg 2 /sampling method	The report states that samples were collected from 0.3m below the surface. Can you please provide justification within the report as to whether samples collected from 0.3m are likely to be representative of the stockpile.	20/09/2024	Updated to state "Samples were collected from this depth to minimise loss of volatile contaminants during sampling, and are considered to adequately represent the stockpile contaminant characteristics for the purpose of waste classification."	3/10/2024	Closed	14/10/2024
3	Section 2/pg 2 /primary sample collected	Please provide justification for the number of samples collected? NSW EPA (2022) Sampling design guidelines state that "Stockpiles of material that require waste classification for disposal or transport to a recycling facility must be sampled in accordance with the minimum number of samples outlined in Table 3 and Table 4' (Section 5.4.6).	20/09/2024	The number of samples collected (5) exceeds the minimum number samples recommended in NSW EPA (2022) for a stockpile of this size. Text has been updated to reflect this.	3/10/2024	Closed	14/10/2024
4	Section 2/pg 2 /sample analysis	The waste classification guidelines state that, 'Generators of waste must select the chemical contaminants that are known to be present, or are likely to be present in the waste. This may be informed by the site activities, site history, or the processes which produced the waste. Generators of waste must be able to justify the chemical contaminants selected for testing and keep records of that decision for three years.' Please can you provide a couple of sentences within the report which justify the selection of tested analytes (noting that the receiving landfill will not have access to the RAP/VWP/RWP).	20/09/2024	Based on historical investigations completed at the site, contaminants of potential concern for the material were identified as TRH, BTEXN, VOC, PAH, metals, asbestos.	3/10/2024	Closed	14/10/2024
5	Section 2/pg 2 & Attachment D	Please justify why no trip spike or trip blank samples were taken and the possible impact of this on the QAQC evaluation.	20/09/2024	Trip spike and trip blank samples were collected and reported holistically for the remediation and validation activities completed at the site. Overall QA/QC assessments (as reported in the RVR) did not identify significant loss of volatiles from trip spike samples, or detections in trip blank samples. As such, cross-contamination is not considered to have occurred during stockpile sampling, storage, or transport, neither is significant loss of volatiles leading to under-reporting of contaminants. As such, the lack of trip spike/blank samples for this individual stockpile is not considered to negatively impact the overall QA/QC evaluation, or the classification itself.	3/10/2024	Closed	14/10/2024
6	Attachment A	Figure should be approved for inclusion in final version of report	20/09/2024	Updated	3/10/2024	Closed	14/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP004 re-treated. Rev 0 (Senversa, 28 June 2024)**
Final Report: **Stockpile Assessment TSP004 re-treated. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	17-Jul-24	Noted and updated.	15/08/2024	Closed	15/09/2024
2	Table 1.1	The stockpile is reportedly 12m wide x 12m long x 2.3m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	17-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	15/08/2024	Closed	15/09/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	17-Jul-24	A flowchart of the treatment and assessment process is provided in Section 3.2 of the VWP. In summary, material was segregated upon excavation based on observed material type. Material not observed to comprise ACM impacts was loaded onto the power screen fitted with a vapour extraction system and aerator to undergo treatment. Following treatment, the material was stockpiled for validation in accordance with the VWP. If validated as suitable for use the material was reinstated, with consideration of any limitation re-uses outlined in the validation memorandum (if any). A summary diagram of treatment and validation can be included in the RVR for Stage1.	15/08/2024	Closed	15/09/2024
4	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	17-Jul-24	PID readings taken from the vapour extraction system fitted to the powered screen via outlet ports. The pre-treatment reading is taken from the port during the screening process but prior to the vapours passing through a GAC filtration system. The post-treatment reading is taken from a port once the extracted vapours have passed through the GAC filtration system (Table 1.1) PID readings from soil sub-sample readings are taken as part of soil sampling procedure (i.e. standard field PID scrrening as part of soil sampling). (Section 2.1) *In-situ* PID readings are *in-situ* readings collected from the stockpile following treatment (Section 2.2) Clarifications added to the letter.	15/08/2024	Closed	15/09/2024
5	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	17-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	15/08/2024	Closed	15/09/2024
6	Section 4/ pg 6	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	17-Jul-24	Section updated.	15/08/2024	Closed	15/09/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	17-Jul-24	This was a mistake during compilation, the photolog has been included in Attachment B and ASLP results presented in Attachment C.	15/08/2024	Closed	15/09/2024
8	Attachment D - Soil Vapour sample integrity	Senversa have stated that samples were received by the lab in a chilled condition - this is noted on the primary sample receipt - but where are sample temperatures recorded? Can you reference the sample temp (reported by lab receipt)	17-Jul-24	Eurofins mgt (1076670) manually recorded the sample temperature on the COC upon receipt of the samples (2.8 degrees) with ALS (ES2408202) reporting sample temperatures on the SRN (3.4, 2.2 and 2.4 degrees). Both documents are included in Attachment E (noting the SRN from ALS had accidentally been omitted in Rev0). Attachment D references <5 degrees instead of listing all temperatures recorded by the laboratory.	15/08/2024	Closed	15/09/2024
9	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines. Although 12 samples were collected and analysed, only 5 were analysed for the broader suite of testing, please provide justification for this.	17-Jul-24	This material was observed as natural, not fill. The VWP requires natural material be analysed for VCHs only. This stockpile was subject to the broader analytical suite for select samples as a conservative approach on the basis that this material was situated directly beneath fill materials. The overall sampling density in comparison to NSW EPA (2022) will be included in the Stage 1 RVR .	15/08/2024	Closed	15/09/2024
10	Attachment B - Site Photographs	ASLP results are presented in the site photographs section	17-Jul-24	This was a mistake during compilation, the photolog has been included in Attachment B and ASLP results presented in Attachment C.	15/08/2024	Closed	15/09/2024
11	Attachment C + general	Asbestos analysis was completed but results are not discussed in report or presented in lab summary table	17-Jul-24	Letter and table updated.	15/08/2024	Partially closed but acceptable.	15/09/2024
12	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	17-Jul-24	2-propanol leak detection was undertaken as per the VWP. The use of 2-propanol is to assess for the presence of ambient air (atmosphere) in the soil vapour samples and therefore for the potential dilution and underestimation of soil vapour concentrations measured. In a stockpile of coarse material, ambient air could be preferentially drawn into the stockpile along the soil vapour tubing. The absence of significant leaks during soil vapour stockpile sampling provides confidence that the soil vapour results are representative of soil vapours inside the stockpile assessed and that they can be relied upon to assess suitability for reuse on site.	15/08/2024	Closed	15/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Stockpile Assessment TSP005. Rev 0 (Senversa, 22 January 2024)**
Report: **Stockpile Assessment TSP005. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Noted and updated.	15/08/2024	Closed	9/10/2024
2	Table 1.1	Please provide table footnote explaining what 'comprised of previous/combined stockpile ID refers to	18-Jul-24	Footnote added to clarify. To confirm TSP005 did not comprise mixed materials. The material was excavated and underwent a preliminary screening as SP009. Once the requirement for treatment was confirmed, the stockpile was re-named TSP005 for treatment. No other material was mixed with the stockpile.	15/08/2024	Closed	9/10/2024
3	Attachment C/Table C	Table C? is not labelled - assuming it is ASLP results?	18-Jul-24		15/08/2024	Closed	9/10/2024
4	Table 1.1	The stockpile is reportedly 15mx15mx2m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (>1 sample per 50 m^3 vs 1 sample/100 m^3 or 3 samples) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	15/08/2024	Closed	9/10/2024
5	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	15/08/2024	Closed	9/10/2024
6	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	15/08/2024	Closed	9/10/2024
7	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	15/08/2024	Closed	9/10/2024
8	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	15/08/2024	Closed	9/10/2024
9	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	15/08/2024	Closed	9/10/2024
10	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	15/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP006. Rev 0 (Senversa,12 January 2024)**
Final Report **Stockpile Assessment TSP006. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Noted and updated.	15/08/2024	Closed	9/10/2024
2	Table 1.1	Please provide table footnote explaining what 'comprised of previous/combined stockpile ID refers to	18-Jul-24	Footnote added to clarify. To confirm TSP006 did not comprise mixed materials. The material was excavated and underwent a preliminary screening as SP011. Once the requirement for treatment was confirmed, the stockpile was re-named TSP006 for treatment. No other material was mixed with the stockpile.	15/08/2024	Closed	9/10/2024
3	Table 1.1	The stockpile is reportedly 10mx13mx3.1m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (>1 sample per 50 m^3 vs 1 sample/100 m^3 or 3 samples) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	15/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	15/08/2024	Closed	9/10/2024
5	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	15/08/2024	Closed	9/10/2024
6	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	15/08/2024	Closed	9/10/2024
7	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	15/08/2024	Closed	9/10/2024
8	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	15/08/2024	Closed	9/10/2024
9	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	15/08/2024	Closed	9/10/2024
10	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	15/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP007. Rev 0 (Senversa,14 December 2023)**
Final Report **Stockpile Assessment TSP007. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24		21/08/2024	Closed	9/10/2024
2	Table 1.1	Please provide table footnote explaining what 'comprised of previous/combined stockpile ID refers to	18-Jul-24	Not applicable, TSP007 was not combined with other material or assessed under a different stockpile ID.	21/08/2024	Closed	9/10/2024
3	Table 1.1	The stockpile is reportedly 12mx10mx2.8m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (>1 sample per 50 m^3 vs 1 sample/100 m^3 or 3 samples) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	21/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	21/08/2024	Closed	9/10/2024
5	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	21/08/2024	Closed	9/10/2024
6	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	21/08/2024	Closed	9/10/2024
7	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	21/08/2024	Closed	9/10/2024
8	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	21/08/2024	Closed	9/10/2024
9	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	21/08/2024	Closed	9/10/2024
10	Attachment D	Please update report with pending interlaboratory dupc	18-Jul-24	Have completed the new RPD table with the inter-laboratory results included, as well as in table 1_soil results. No RPD exceedances were reported.	22/08/2024	Closed	9/10/2024
11	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	21/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP008. Rev 0 (Senversa, 28 June 2024)**
Final Report **Stockpile Assessment TSP008. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in Revision 1 version.	19/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 32mx25mx1.2m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	19/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	19/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	19/08/2024	Closed	9/10/2024
5	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	19/08/2024	Closed	9/10/2024
6	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	19/08/2024	Closed	9/10/2024
7	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	19/08/2024	Closed	9/10/2024
8	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version	19/08/2024	Closed	9/10/2024
9	Attachment D/Table C	Asbestos results presented as a series of '1''s - please update report	18-Jul-24	Updated in revision 1 version	21/08/2024	Closed	9/10/2024
10	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	21/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP009. Rev 0 (Senversa, 05 February 2024)**
Final Report **Stockpile Assessment TSP009. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 16mx17mx1.5m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	Section 2.0	update error reference	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
4	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
6	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
7	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
8	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
9	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
10	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
11	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP010. Rev 0 (Senversa, 26 February 2024)**
Final Report **Stockpile Assessment TSP010. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 12mx10mx1.9m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
8	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
9	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
10	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP011. Rev 0 (Senversa, 21 February 2024)**
Final Report **Stockpile Assessment TSP011. Rev 1 (Senversa, 21 February 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 15mx15mx2m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
8	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
9	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
10	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP012. Rev 0 (Senversa, 21 February 2024)**
Final Report **Stockpile Assessment TSP012. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 10mx17mx2m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
8	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
9	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
10	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP013. Rev 0 (Senversa, 20 February 2024)**
Final Report **Stockpile Assessment TSP013. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 13mx9mx2.3m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
8	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
9	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
10	Attachment D	Table mentions TSP006	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
11	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP014. Rev 0 (Senversa, 01 July 2024)**
Final Report **Stockpile Assessment TSP014. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 10mx5mx2.2m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	Table 1.1 pg 2	Has the auditor been provided with the original TSP014 letter? (21 Feb 24)	18-Jul-24	No this report has been superseded but can be provided if required	22/08/2024	Closed	9/10/2024
4	Section 2.0/first paragraph	Error reference	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
5	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
7	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
8	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
9	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
10	Page 6/Section 4	Please update section re: Auditor's endorsement of revised RBSLs (based on Auditor email dated 15 July 2024 re: Modified soil vapour validation approach and RBSLs	18-Jul-24	Updated in revision 1 version.	22/08/2024	Closed	9/10/2024
11	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
12	Attachment C/Table A	Asbestos results presented as a series of '1''s - please update report	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP015. Rev 0 (Senversa, 22 February 2024)**
Final Report **Stockpile Assessment TSP015. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 10mx12mx2.1m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
8	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
9	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
10	Attachment C/Table A	Asbestos results presented as a series of '1''s - please update report	18-Jul-24	Asbestos was not analysed in TSP015 as it was natural clayey material.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP016. Rev 0 (Senversa, 28 June 2024)**
Final Report **Stockpile Assessment TSP016. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	9/10/2024
2	Table 1.1	The stockpile is reportedly 10mx15mx2.6m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	9/10/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
4	Table 2.1	Please provide justification for anlaysis of VOC and ALSP HVOC only. The RVP states that materials excavated from RA2 will be analysed for heavy metals, TRH, PAH and asbestos (NEPM) + VCH and ASLP VCH.	18-Jul-24	As per the VWP, natural material from RA2 will only be analysed for VCHs/ASLP VCH. Additional analyses only required for fill material.	22/08/2024	Closed	9/10/2024
5	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	9/10/2024
6	Table 2.1	It is acknowledged that Senversa has provided a statement on presence of anthropogenic inclusions, however, can Senversa also include statement regarding asbestos observations	18-Jul-24	No comment has been added regarding asbestos observations as the stockpile assessed was of natural material.	22/08/2024	Closed	9/10/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	9/10/2024
8	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024
9	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	9/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile Assessment TSP044. Rev 0 (Senversa, 16 July 2024)**
Final Report **Stockpile Assessment TSP044. Rev 1 (Senversa, 02 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	15/09/2024
2	Table 1.1	The stockpile is reportedly 11mx10mx1m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	18-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (1 sample per 50 m^3 vs 1 sample/100 m^3 for the main contaminants of concern) which is considered sufficient to provide an adequate assessment of the stockpile. Additional information added to the letter report.	22/08/2024	Closed	15/09/2024
3	General	The report would benefit from a short paragraph/diagram (potentially below the intro section) which summarises the overal treatment and sampling process. Just something that provides clarity to the reader about the staging of sampling and remediation and testing, this would help provide more context for the information that follows.	18-Jul-24	Refer to comment response #3 for TSP004 stockpile letter.	22/08/2024	Closed	15/09/2024
4	Table 2.1	Please provide clarification on the difference between the pre-remediation PID results, the post remediaition PID results and the 'range of PID readings from sub-soil samples' and update report to provide clarity.	18-Jul-24	Refer to comment response #4 for TSP004 letter.	22/08/2024	Closed	15/09/2024
5	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	18-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	22/08/2024	Closed	15/09/2024
6	Table 2.1	The RVP states that sampling density will generally be consistent with that for stockpiled materials in NSW EPA (2022) guidelines. Please provide a statement clarifying that sampling density is consistent with these guidelines.	18-Jul-24	Refer to comment response #9 for TSP004 stockpile letter.	22/08/2024	Closed	15/09/2024
7	Attachment C	Asbestos results are missing from summary tables	18-Jul-24	Updated in revision 1 version	22/08/2024	Closed	15/09/2024
8	Attachment D	Re: use of 2-propanol to assess 'whether sample comprises soil vapour or atmosphere' - just wondering what this testing actually proves in a stockpile scenario? Are there limitations to this method, if so, please note them in the report.	18-Jul-24	Refer to comment response #12 for TSP004 stockpile letter.	22/08/2024	Closed	15/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP013. Rev 0 (Senversa, 20 February 2024)**
Final Report: **Stockpile assessment SP013. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Table 1.1	The stockpile is reportedly 3mx3mx1m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling was undertaken in accordance with the auditor approved VWP using the stockpile sampling densities listed for RA2 (i.e. minimum of 3 samples/stockpile).Given the homogeneity and small volume of material, this was considered appropriate and representative of soil conditions.	26/07/2024	Closed	19/08/2024
3	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP024. Rev 0 (Senversa, 09 February 2024)**
Final Report: **Stockpile assessment SP024. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Introduction	Please can you provide justification for not treating these soils despite their RA2 origin	19-Jul-24	The material of the soils (clay) were not amendable to treatment via the screen. Analytical results also indicated the material met the validation criteria; thus alternative treatment of the soil was not required, in accordance with the approved VWP.	26/07/2024	Closed	19/08/2024
3	Table 1.1	The stockpile is reportedly 10mx5mx1m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling was undertaken in accordance with the approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (10 samples per 50 m^3 vs 1 sample/100 m^3 or 3 samples) which is considered sufficient to provide an adequate assessment of the stockpile.	26/07/2024	Closed	19/08/2024
4	Table 2.1	Please provide justification for the analytical testing suite	19-Jul-24	The analytical suite was as per the VWP for RA2 stockpiles of natural material.	7/08/2024	Closed	19/08/2024
5	Attahcment D/QAQC table	TSP006 is mentioned multiple times	19-Jul-24	Fixed in Revision 1 version.	2/08/2024	Closed	19/08/2024
6	Section 4.0	Please screen lab results against revised RBSL's and update conclusions section. Please flag any stockpiles to the auditor where the conclusions have changed based on re-comparison of results to revised RBSLs	19-Jul-24	Updated in Revision 1 versions. Conclusions not affected by updated RBSLs.	26/07/2024	Closed	19/08/2024
7	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP025. Rev 0 (Senversa, 20 February 2024)**
Final Report: **Stockpile assessment SP025. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Introduction	Please can you provide justification for not treating these soils despite their RA2 origin	19-Jul-24	The material was not amenable to screening due to high clay content. Analytical results also indicated the material met the validation criteria; thus alternative treatment of the soil was not required, in accordance with the approved VWP.	26/07/2024	Closed	19/08/2024
3	Table 1.1	The stockpile is reportedly 18mx10mx2.5m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling was undertaken in accordance with the approved VWP (stockpile samples collected at a depth of at least 0.3 m beneath the surface). Samples were collected at an increased sample density of (10 samples per 450 m^3 vs 1 sample/100 m^3 or 3 samples) which is considered sufficient to provide an adequate assessment of the stockpile. Material was observed to be homogeneous in nature and on this basis, the samples collected are considered representative of SP025.	26/07/2024	Closed	19/08/2024
4	Table 2.1	Please provide justification for the analytical testing suite	19-Jul-24	The analytical suite was as per the VWP for RA2 stockpiles of natural material.		Closed	19/08/2024
5	Section 4.0	Please screen lab results against revised RBSL's and update conclusions section. Please flag any stockpiles to the auditor where the conclusions have changed based on re-comparison of results to revised RBSLs	19-Jul-24	Updated in Revision 1 versions. Conclusions are still valid.	26/07/2024	Closed	19/08/2024
6	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP028. Rev 0 (Senversa, 15 July 2024)**
Final Report: **Stockpile assessment SP028. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Section 4.0	Please update report section 4.0 + conclusions based on endorsed revised RBSLs.	19-Jul-24	Updated in Revision 1 versions. Conclusions remain unchanged.	26/07/2024	Closed	19/08/2024
3	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024
4	Table A - Soil analytyical results	Asbestos data presented as series of 1's and 0's. Please update table/table legend	19-Jul-24	Table has been updated in Revision 1.	26/07/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP045. Rev 0 (Senversa, 02 July 2024)**
Final Report: **Stockpile assessment SP045. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Table 1.1	The stockpile is reportedly 16mx8mx1.5m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling has been undertaken in accordance with the approved VWP. Samples were collected at a conservative sample density of 10 samples per 200 m^3, which is considered to provide an adequate assessment of fill quality.	26/07/2024	Closed	19/08/2024
3	Table 2.1	From memory there were some PCB impacted materials in the vicinity of RA11? However, this stocpile was not tested for PCBs - is this a data gap?		57 primary samples analysed for PCBs across RA11 and the boundary of the substation. A single detection above HIL-B was reported in Botany Sands, no detections of PCBs were reported in fill materials. On this basis, the absence of PCB data in SP045 in not considered to present a significant uncertainty for the re-use suitability of the material.	26/07/2024	Closed	19/08/2024
4	Section 4.0	Please update report section 4.0 + conclusions based on endorsed revised RBSLs.	19-Jul-24	Revised RBSLs updated in Revision 1 version. Conclusions remain unchanged.	26/07/2024	Closed	19/08/2024
5	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024
6	Table A - Soil analytyical results	Asbestos data presented as series of 1's. Please update table/table legend	19-Jul-24	Table has been updated in Revision 1.	26/07/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP059. Rev 0 (Senversa, 15 July 2024)**
Final Report: **Stockpile assessment SP059. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Table 1.1	The stockpile is reportedly 5mx10mx3m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling was undertaken in accordance with the approved VWP. Samples were collected at an increased sampling density of 10 samples per 150 m^3 (from 1 per 100 m^3) which is considered to provide an adequate assessment of fill quality.	26/07/2024	Closed	19/08/2024
3	Section 4.0	Please update report section 4.0 + conclusions based on endorsed revised RBSLs.	19-Jul-24	Revised RBSLs updated in Revision 1 version. Conclusions remain unchanged.	26/07/2024	Closed	19/08/2024
4	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024
5	Table A - Soil analytical results	An ESL for TRH has been exceeded but has not been discussed in the body of the report		ESL exceedance discussion added to table 3-1. Pro UCL output provided as Attachment E.	2/08/2024	Closed	19/08/2024
6	Table A - Soil analytyical results	Asbestos data presented as series of 1's. Please update table/table legend		Table has been updated in Revision 1.	26/07/2024	Closed	19/08/2024
7	Table C - asbestos quanitifcation	Table C appears to include the results of a sieving investigation, however, there is no discussion of the methods/reasoning/results in the body of the report		Field quantification of asbestos was conducted as the excavation area was potentially impacted with bonded ACM. Details added to Table 2.1.	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP034. Rev 0 (Senversa, 27 June 2024)**
Final Report: **Stockpile assessment SP034. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Table 1.1	The stockpile is reportedly 10mx4mx1m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling was undertaken in accordance with the approved VWP. Samples were collected at an increased sampling density (5 samples per 40 m^3,compared to 1/100 m^3 or 3 samples) which is considered to provide an adequate assessment of the material.	26/07/2024	Closed	19/08/2024
3	Table 2.1	From memory there were some PCB impacted materials in the vicinity of RA11? However, this stocpile was not tested for PCBs - is this a data gap?		57 primary samples analysed for PCBs across RA11 and the boundary of the substation. A single detection above HIL-B was reported in Botany Sands, no detections of PCBs were reported in fill materials. On this basis, the absence of PCB data in SP034 in not considered to present a significant uncertainty for the re-use suitability of the material.		Closed	19/08/2024
4	Section 4.0	Please update report section 4.0 + conclusions based on endorsed revised RBSLs.	19-Jul-24	Revised RBSLs updated in Revision 1 version. Conclusions remain unchanged.	2/08/2024	Closed	19/08/2024
5	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024
6	Table A - Soil analytyical results	Asbestos data presented as series of 1's. Please update table/table legend	19-Jul-24	Table has been updated in Revision 1.	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP036. Rev 0 (Senversa, 09 July 2024)**
Final Report: **Stockpile assessment SP036. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	26/07/2024	Closed	19/08/2024
2	Table 1.1	The stockpile is reportedly 16mx8mx1.6m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling was undertaken in accordance with the approved VWP. Material was observed to be homogenous in nature and on this basis, the increased sampling density (5 samples / 200 m^3 instead of 1/100 m^3 or 3 samples) was considered appropppriate.	26/07/2024	Closed	19/08/2024
3	Section 2/first paragraph	error reference	19-Jul-24	Fixed in Revision 1 version.	2/08/2024	Closed	19/08/2024
4	Section 4.0	Please update report section 4.0 + conclusions based on endorsed revised RBSLs.	19-Jul-24	Revised RBSLs updated in Revision 1 version. Conclusions remain unchanged.	2/08/2024	Closed	19/08/2024
5	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024
6	Table A - Soil analytyical results	Asbestos data presented as series of 1's. Please update table/table legend	19-Jul-24	Table has been updated in Revision 1.	2/08/2024	Closed	19/08/2024
7	Table C - asbestos quanitifcation	Table C appears to include the results of a sieving investigation, however, there is no discussion of the methods/reasoning/results in the body of the report	19-Jul-24	Field quantification of asbestos was conducted as the material was potentially impacted with bonded ACM. Details added to Table 2.1.	2/08/2024	Closed	19/08/2024
8	Attachment D/QAQC table	QAQC table references SP045	19-Jul-24	Fixed in Revision 1 version.	2/08/2024	Closed	19/08/2024
9	Lab reports	Sample temps recorded on sample receipts in excess of 6 degrees C should be discussed in QAQC section	19-Jul-24	Additional discussion added to the QAQC section	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Stockpile assessment SP041. Rev 0 (Senversa, 02 July 2024)**
Final Report: **Stockpile assessment SP041. Rev 1 (Senversa, 16 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor's comment	Comment Dates
1	Introduction	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	19-Jul-24	Updated in Revision 1 version.	2/08/2024	Closed	19/08/2024
2	Table 1.1	The stockpile is reportedly 15mx5mx2m high and all samples were collected from 0.3m depth. Can Senversa provide a statement which justifies this sampling depth and a statement which discusses if samples collected are considered to be representative of the stockpile	19-Jul-24	Sampling has been undertaken in accordance with the approved VWP. Samples were collected at an increased sample density of 6 samples per 150 m^3, which is considered to provide an adequate assessment of the material.	2/08/2024	Closed	19/08/2024
3	Section 4.0	Please update report section 4.0 + conclusions based on endorsed revised RBSLs.	19-Jul-24	Revised RBSLs updated in Revision 1 version. Conclusions remain unchanged.	2/08/2024	Closed	19/08/2024
4	Figure 1	Figure should be approved for inclusion in final version of report Does the figure show where the material was excavated from or where it was placed after excavation?	19-Jul-24	Figure has been approved. The source of the material is noted in the text of the report, and placement of material will be documented as part of materials tracking which will be included in the final Remediation Validation Report.	2/08/2024	Closed	19/08/2024
5	Table A - Soil analytyical results	Asbestos results not presented in summary tables	19-Jul-24	Added to Revision 1 version.	2/08/2024	Closed	19/08/2024
6	Attachment D/QAQC table	QAQC table references soil vapour sampling when none was conducted	19-Jul-24	Fixed in Revision 1 version.	2/08/2024	Closed	19/08/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Change in land use remediation endpoint. REV 0 (Senversa, 01 May 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1							
2							
3							

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Stage 1 Remediation - RA1 Vapour Assessment, Jeffman, Waterloo. REV 0 (Senversa, 12 July 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1	Bore logs	Can a comment on water level be recorded on logs + soil moisture descriptors? Or alternatively a comment on these attributes in the report text?	27/08/2024	Ground water was not encountered during the installation and thus is not included on the logs. A moisture descriptor of the soil is provided in the Material Description section of each bore log. No change to report.	16/09/2024	Closed	17/09/2024
2	Bore logs	Can a legend be added to the logs? What does the G symbol refer to? Or alternatively a comment made in the report text.	27/08/2024	The G simple refers to a gas monitoring well. No change to report	16/09/2024	Closed	17/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Validation Assessment Approach for the Pedestrian Link. REV 0 (Senversa, 11 June 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1		Can you provide additional clarity as to the location of Area C - it is not shown on the figure. And state why Area A/B and Area C are being assessed using different criteria.	27/08/2024	This has been superseded by the subsequent validation reports	16/09/2024		

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
ev 0 (Draft) Report: **Groundwater Validation: VCH Migration Control and Post-Remediation Verification - Stage 1 Remediation (Senversa, Rev 0, 08 August 2024)**
ev 1 (Final) Report: **Groundwater Validation: VCH Migration Control and Post-Remediation Verification - Stage 1 Remediation (Senversa, Rev 1, 13 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1	1.0 Introduction/pg 1	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	27/08/2024	Report text updated	3/09/2024	Closed	16/09/2024
2	3.1/pg 5	Well construction details don't add up - check construction logs	27/08/2024	Well construction logs and gauging records have been cross checked. All new wells were completed with stick-up well heads of variable heights - this has been clarified in the text and the "stick up" listed in the gauging table where known (Table 2). Logs for pre-existing wells used are also now included for completeness.	13/09/2024	Closed	16/09/2024
3		If 'Parcel 1', 'Parcel 2' etc are being used in the text, these Parcel locations should be included on a figure	27/08/2024	Figure 1 updated to identify Parcels etc. Attachment J added to include Managmeent Order boundary map.	3/09/2024	Closed	16/09/2024
4		'chemical odour' noted in IW806 on 07/05/24 needs to be discussed	27/08/2024	Report text updated in Section 4.2.3	3/09/2024	Closed	16/09/2024
5	2.2/pg 2	Is a note warranted regarding the removal of the management order in this section?	27/08/2024	Some further context on removal of Management Order over Stage 1 site added to Section 1.	3/09/2024	Closed	16/09/2024
6		A sub-section on the groundwater sampling method should be added. The field notes had to be reviewed to identify that low flow sampling using a peristaltic pump was used.	27/08/2024	Report text updated with a overview - noting that the VWP provides detailed methodologies that were followed.	3/09/2024	Closed	16/09/2024
7	Appendix C	With regards to the DQI exceedances noted in Appendix C - reasoning must be presented for each non-conformance/set of non-conformances to discuss whether the data is realiable/useable. For example, what is the likely cause of the detection of various analytes within the rinsates? Is the data still useable?	27/08/2024	Report text updated in Appendix C	3/09/2024	Closed	16/09/2024
8	Tables	There are tables missing from the Tables appendices eg Table 1 + Table 2?	16/09/2024	Table 1 and 2 have been added and Rev1 report has been re-issued. **Updated Rev1 report remains unchanged otherwise.**	25/09/2024	Not addressed, however, the tables have been provided in another version of the report, overall the auditor is satisfied that this is a minor discrepancy.	16/09/2024
9	Methane data	Methane was CoPC - there are some methane results above LOR but these have not been discussed in the report	16/09/2024	The RAP identified methane as a potential issue on Stage 2 associated with historic EISB actions. The detections identified are on Stage 2 site and do not form part of the Stage 1 validaton dataset - they have no bearing on Stage 1 site given there is effective migration control. The Stage 1 DSI and soil vapour validation sampling also assessed bulk ground gases, with methane generally not detected and all concentrations less than screening levels. In any case, the dissolved methane detections are reported at low concentrations less than the screening level conservatively protective of formation of a hazardous atmosphere referenced in Section 2.2.4 of NSW EPA (2020) *Assessment and management of hazardous ground gas* .	25/09/2024	Closed	16/10/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Report: **Stage 1 Remediation - RA2 Vapour Verification Assessment, Jeffman, Waterloo (REVA, 14 August 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1	1.0 Introduction/pg 1	Stage 1 comprises Part of Lot 4 and Part of Lot 3. Please update all reports.	13/09/2024	Amended	13/09/2024	Closed	17/09/2024
2	Figures	The excavation area around VTP69 including the location of VTP69 is not presented	13/09/2024	Figure amended	13/09/2024	Closed	17/09/2024
3	pg4/3.3	The Senversa 2024b report, notes that a 3x3x1m area would be excavated around VTP65. What is the reason for the change and where will this be documented?	13/09/2024	The report text notes that a 10m2 excavation was excavated around VTP65. This is generally consistent with the stated 3x3 excavation proposed and is not considered a change. We now refer to report *Validation of Soils Remaining In-situ Outside of RWP Remediation Areas* – Stage 1 dated 5 September 2024.	13/09/2024	Closed	17/09/2024
4	pg4/ 3.3/final bullet	Were validation samples collected from the base and walls of VTP65 and 69? And where are these results presented/proposed to be presented?	13/09/2024	Yes. We now refer to report *Validation of Soils Remaining In-situ Outside of RWP Remediation Areas* – Stage 1 dated 5 September 2024.	13/09/2024	Closed	17/09/2024
5	pg 7/5.0, final paragraph	Can a concluding statement be added with regards to whether the remediation objectives have been achieved?	13/09/2024	As the remediation objectives are related to soil, groundwater and vapour an overarching statement is provided in the RVR Doc 49 rather than this report. A comment has been added to the end of the report to reflect this.	13/09/2024	Closed	17/09/2024
6		With regards to the vapour sampling, can a statement/graphs be provided with regards to climatic conditions leading up to all sampling events (e.g. atmospheric pressure conditions rainfall + soil moisture, wind speed and temperature?) Given that sampling was fairly shallow, atmospheric pressure and rainfall may have had an impact on results - can Senversa provide commentary on how climatic conditions leading up to sampling events may have impacted on vapour results (or not?)	13/09/2024	A discussion on the climatic conditions prior to and during sampling has been added to Section 4	13/09/2024	Closed	17/09/2024
7		**Auditor note: During a meeting between GHD and Senversa, Senversa clarified that an additional round of vapour montioring would be completed and the results would be presented withing the REV1 version of the report. This report has been received and additional commentary is presented below (noting that the above commentary was not submitted to Senversa prior to them issuing the REV1 document**		Noted	13/09/2024		17/09/2024
8	pg 2/second bullet	Section 0?	13/09/2024	Amended	13/09/2024	Closed	17/09/2024
9	Attachment D/Logs	The logs do not indicate if groundwater was encountered. The logs do not clarifiy what the 'G' symbol related to at the base of each hole? RA2 SV02 log 0.25m-0.5m is logged as 'Fill: dark brown' - could the log present additional descriptions of this material. i.e what does dark brown denote? (this also applies to a few other log entries)	13/09/2024	A moisture descriptor of the soil is provided in the Material Description section of each bore log. The G which referes to gas well has been removed from logs. Where dark brown is described below a dashed line in SV02 and other logs this is a shift in colour within the one material type and not a full shift of material therefore only the changes are listed and not the whole description.	13/09/2024	Closed	17/09/2024
10	pg 7/Follow up sampling	typo 'SV0112'	13/09/2024	Amended	13/09/2024	Closed	17/09/2024

Client: Jeffman Pty Ltd
Project: Stage 1, Waterloo
Draft Report: **Validation of soils remaining in-situ outside of RWP Remediation Areas – Stage 1 (REV0, 05 September 2024)**
Final Report: **Validation of soils remaining in-situ outside of RWP Remediation Areas – Stage 1 (REV1, 19 September 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1	Introduction	The report would benefit from an additional paragraph in the introduction providing an overview of the information presented in the report.	13/09/2024	Text updated	17/09/2024	Closed	25/09/2024
2	pg 5/section 2.2.1	Please provide further discussion and present additional lines of evidence to support the potential risk of encountering asbestos within the retained roadway. > At what depths and within what fill units was asbestos detected adjacent to the retained road? > Were the adjacent asbestos finds bonded or friable? were they confined to one layer/one isolated area? or randomly distributed throughout the fill? >what condition were the asbestos finds? good/poor? > Were the asbestos finds adjacent to the retained road found in the same fill types/layers as those observed beneath the retained road? > based on intrusive investigations within and immediately adjacent to the retained road, please summarise the thickness of fill retained beneath the road? > Does the site history of the retained road differ in anyway to the areas nearby where asbetsos was found? > were the excavated faces to the north and south of the road visually inspected and was evidecne of asbestos oberved? > was asbestos observed wihtin the test pit walls/spoil of the tp's excavated into the road? + within the eg EXTP14 + VTP65? >was asbestos observed in any of the historical testing locations that were completed near to the retained road >at what depths was abestos found in other portions of the site adjacent to the retained road and do these depths correlate with the fill layers exposed on the sides of the road or do they correspond to deeper fill layers that wern't exposed?? > were the anthropogenic material inclusions (eg brick, tile etc) observed witin the retained road fill also observed elsewhere on site where asbestos was observed? All of the above should be used to formulate an opinion of likelihood of encountering asbestos into the future, what type of asbetsos is most likely to be encountered and to what degree could the	13/09/2024	Text updated within Section 6.2 and Section 7.2	17/09/2024	Acceptable, closed	16/10/2024
3	Pg 3/Section 3.1bullet /sub bullet 3	*There was a lower occurrence of fill potentially impacted by ACM in other portions of Stage 1 site, with ACM impacts observed in minor volumes and in more clearly defined fill layers. In these areas potentially impacted fill based on visual inspection was stockpiled for disposal.'* - please you can provide clarity as to the meaning of this sentence?	13/09/2024	Text updated to provide further clarity.	17/09/2024	Closed	16/10/2024
4	pg 3/Section 3.1	Confirming that all slabs (excluding 'retained slabs') have been removed within stage 1? And that 0.4-0.5m bgl of fill materials were removed from below the deepest slab that was encountered?	13/09/2024	Yes this is correct.	17/09/2024	Closed	25/09/2024
5	pg 3/Section 3.1	Was asbestos always found attached to concrete slabs? Was it sometimes found attached to slabs? Were there certain slabs that were more associated with asbestos than others? Please provide a summary.	13/09/2024	Section 3.1.2 added.	17/09/2024	Closed	16/10/2024
6	pg 3/Section 3.1	the report states that material was segregated if it was grossly impacted by acm, were there any grossly contaminated areas? Where were they?	13/09/2024	Section 3.1.2 added.	17/09/2024	Closed	16/10/2024
7	pg 3/Section 3.1/bullet 10	*'EPS regularly excavated down to natural soils to verify...'* - are there logs for these exacvations? Can they be referenced in this section?	13/09/2024	No there are no logs. This was an additional exploratory process and would not have been practical to document throughout works.	17/09/2024	Closed	16/10/2024
8	pg 9/6.2.2/field obs	Provide more information with regards to observations of the excavation faces of the roads. Were the faces inpsected in detail? What kind of anthropogenic inclusions were observed? Was the full depth of fill exposed along the entire length of the road? or just some portions?	13/09/2024	Inclusions added to soil description in Table 6-2. Text added to note entire length of wall exposed. The entire length was inspected.	17/09/2024	Closed	16/10/2024

9	Table 6.3.1/soil description	*'potential ACM in certain areas' - why only potential? Was lab analysis carried out?*	13/09/2024	Lab anlaysis was not carried out on all observed fragments. Although it's very likely that observed fragments were asbestos containing, based on historical analysis on previous anlaysis of ACM, it's considered reasonable to identfy them as potential if not analysed. This has no implications given that all poitential ACM observed during remediation has been treated as ACM	17/09/2024	Closed	16/10/2024
10	Section 6.3.2/pg 10	Is the asbestsos at these three/four locations still present? At what depths were these exceedances? Why was asbestos <criteria at VTP02 but a driver for careful excavation ?	13/09/2024	Please refer to Section 6.3.2 which notes that - The asbestos impacted fill materials identified in the validation test pits, previous investigations and slab removal process were excavated and disposed of off-site as waste or assessed for suitability for on-site re-use. VTP02 was noted as a driver for careful inspection in the area, not excavation.	17/09/2024	Closed	16/10/2024
11	pg 16/section 7.0	Can a figure please be provided which clearly shows: 'part roadway and sharedway', 'temporary access roadway'	13/09/2024	We have now presented this on Figure 2 of the overarching RVR	17/09/2024	Closed	16/10/2024
12	7.2.2	zinc at 10,000mg/kg - was scrap metal noted on the logs in the vicinity of this sample? Please state if so	13/09/2024	Logs reviewed, no scrap metal was noted. Text updated to note the elevated since may be attirbuted to anthropogenic inclusions such as scrap metal or zinc coated paint, rather than strictly scrap metal.	17/09/2024	Closed	16/10/2024
13	Table 10.1/Pg 27	Stockpile ID 68 row references a report which includes reference to Sp038? Is SP068 a typo?	13/09/2024	It appears this waste classification letter was not provided to the Auditor. This has now been provided via email on 18th September 2023.	17/09/2024	Closed	16/10/2024
14	lab summary tables	asbestos results presented as '1's' or '0's' - please update	13/09/2024	Updated	17/09/2024	Closed	16/10/2024
15	table c1	are the gravimetric results still applicable to soils remaining at the site?	13/09/2024	The final RVR presents data tables comprising data still relevant to the site. An asterix has been added to gravimetric samples exceeding criteria, to note they were removed as part of remediation.	17/09/2024	Closed	16/10/2024
16	Logs	Are there any logs available for NDW01 - NDW06 etc?	13/09/2024	No, these are grab samples	17/09/2024	Closed	16/10/2024
17	6.3.2	Is the asbestos reported in this section still present at the site? Or has it been removed. Please add a line in report to clarify.	13/09/2024	Section 6,3,4 notes that asbestos impacted fill materials identified in the validation test pits, previous investigations and slab removal process were excavated and disposed of off-site as waste or assessed for suitability for on-site re-use.	17/09/2024	Closed	16/10/2024
18	General comment	Similar to the additional discussion required around the asbestos risk associated with the retained road, Senversa need to provide additional lines of evidence re: the potential for contamination (including to asbestsos) to exist below the retained tree support slab (north-western corner of the site)	13/09/2024	Some additional text added to note the nature of asbestos observed in srrounding fill was bonded and in good to fair condition. We have also noted that the portion of retained slab in the north-western corner of the site represents a small portion (<1%) of a broader area proposed for high density residential/commercial land use that's been substantially assessed and/or remediated and validated as meeting the adopted HSLs for asbestos.	17/09/2024	Closed	16/10/2024
19	6.5.3/pg 14	Can you close out the ESL exceedance here? Is it an issue?	13/09/2024	Text added - Consideration of these data with the broader site dataset will be presented in the RVR.	17/09/2024	Closed	16/10/2024
20	6.5.3/pg 15	Any observations of asbestos in hand auger spoil or at surface in tree protection area? Please add a bullet point to the report to cover this.	13/09/2024	Text added.	17/09/2024	Closed	16/10/2024
21	Table 7-5	Please also provide commentary on asbestos observations if any. Also please provide commentary on what these results mean. Do they represent an issue? Why/why not?	13/09/2024	Its noted in this section that a statistical evaluation of key CoPC and analytes reporting exceedances will be presented in the RVR. Asbestos noted as an item as the bottom of the tables	17/09/2024	Closed	16/10/2024
22	pg 22/Section 8	Can 'Part Parcel 4' be clearly labelled on a figure	13/09/2024	This area is described in Table 8-1 , which references Figure 1 and clearly outlines RA11 and RA2 footprints.	17/09/2024	Closed	16/10/2024
23	lab summary tables	RBSL for B(a)P and B(a)P TEQ missing from lab summary tables. Also, minor comment but if updating tables please add criteria for asbestos and present %w/w results to the correct number of decimal points	13/09/2024	These appear to be in the table, please note that the criteria for B(a)P and B(a)P TEQ are revised HILs/ESLs, not RBSLs.	17/09/2024	Closed	16/10/2024
24	Attachment E/qaqc	As per previous auditor comments, where deviations from the planned DQI are reported (e.g. sample temperatures elevated above 6degreesC) Senversa need to provide a statement with regards to useability of the data in the context of this exceedance. Trip spike results could also be referenced to support the argument.	13/09/2024	This section has been updated with additional text	17/09/2024	Closed	16/10/2024
25	Attachment E/qaqc	Re: no rinsate because no reusable field equipment used. What about hand augers?	13/09/2024	This section has been updated with additional text	17/09/2024	Closed	16/10/2024
26	Lab reports	Lab reports appear to be missing for batch 1101279	13/09/2024	Added to report	17/09/2024	Closed	16/10/2024
27	Lab reports	Lab reports appear to be missing for batch 1115077	13/09/2024	Added to report	17/09/2024	Closed	16/10/2024
28	Lab reports	Lab reports appear to be missing for batch ES2422133	13/09/2024	Added to report	17/09/2024	Closed	16/10/2024
29	Lab reports	Lab reports appear to be missing for batch 1116959	13/09/2024	Added to report	17/09/2024	Closed	16/10/2024
30	Lab reports	Lab reports appear to be missing for batch 1102550	13/09/2024	Added to report	17/09/2024	Closed	16/10/2024
31	Lab reports	Lab reports appear to be missing for the historical data - are these available?	13/09/2024	Historical lab reports are not always available and on this basis are not being included for consistency.	17/09/2024	Closed	16/10/2024

Final Report: **Stage 1 Remediation Validation Report: Part Danks Street South Precinct, Waterloo, NSW. Rev 1 (Senversa, 04 October 2024)**

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1	Exec summary	Reminder to please include executive summary in final version of the report	13/09/2024	Updated.	30/09/2024	Closed	15/10/2024
2	Introduction/general	McNally/Senversa are presently working on providing the audit team with a survey plan showing the site boundary and the audit boundaries. Once available, please can this plan be attached to the report and referenced in the introduction (and other applicable locations) within the report. Please also provide commentary around the exclusion of the substation from the sales boundary/site audit boundary.	13/09/2024	The survey has been provided as Appendix L, with introductory text in section 1.1 updated to reflect this. As per discussions, the substation has been retained within the 'Stage 1' boundary, but has been presented as a separate Audit Area. This amendment has been made throughout.	30/09/2024	Closed	15/10/2024
3	Figure 3	As per recent emails between GHD/McNally and Senversa, the audit boundaries have been adjusted to exclude the substation + 3m exclusion zone, please update the figure to reflect this	13/09/2024	Figure updated. As per discussions, the substation has been retained within the 'Stage 1' boundary, but has been presented as a separate Audit Area. This amendment has been made throughout.	30/09/2024	Closed	15/10/2024
4	Introduction/figures	Please provide a really clear statement in the intro that clarifies which portions of the site are stage 1. And then refer the reader to a figure which clearly shows the site boundaries of stage 1 (+ lot boundaries and lot labels)	13/09/2024	Introduction updated.	19/09/2024	Closed	15/10/2024
5	Pg 3/ Table 1-2/site	Please update Figure 1 to clearly show 'the site' boundary (including 'the site' in the legend). Figure 1 could also be updated to clearly show Stage 1 and Stage 2	13/09/2024	Figure updated	19/09/2024	The auditor notes that Figure 1 still shows that the substation is excluded from the audit area, however, this is considered a minor discrepancy as the report text, the SAS and the SAR all clearly state that the substation is included.	15/10/2024
6	Pg 3/ Table 1-2/stage 1 site or site area	Please provide a reference to a figure in this row which very clearly shows the Stage 1 boundary. Stage 1 now excludes susbstation+3m exclusion zone (as per survey plan that Senversa/McNally are preparing)	13/09/2024	Updated. As per discussions, the substation has been retained within the 'Stage 1' boundary, but has been presented as a separate Audit Area. This amendment has been made throughout.	30/09/2024	Closed	15/10/2024
7	Pg 3/ Table 1-2/significant contaminants	These are the significant contaminants stated in the MO. But there are other contaminants of concern for the site which are described wihtin the Senversa remediaiton documents,	13/09/2024	Document updated to refer to relevant section.	19/09/2024	Closed	15/10/2024
8	Pg 6/Table 2.1/stage 1 identification	Please provide a reference to a figure in this row which very clearly shows the Stage 1 boundary. Stage 1 now excludes susbstation+3m exclusion zone (as per survey plan that Senversa/McNally are preparing)	13/09/2024	Updated	20/09/2024	Closed, but table 2.1/Stage 1 Identification states 'The substation and substation exclusion zone are excluded from the main audit area...' - the audiotr considers this to be a minor discrepancy as various other portions of the report clearly state that the substation in included.	15/10/2024
9	Pg 6/Table 2.1/stage 1 area	Please provide an accurate site area based off the survey drawings that will be provided	13/09/2024	Updated	20/09/2024	Closed	15/10/2024
10	Pg 6/2.2/final bullet	Is methane a CoPC for Stage 1? Has it been tested for and dicounted? Can Senversa add a footnote or additional sentence to close this out. It's being identified as a PCoC a the front of the validaiton report but then not mentioned again or tested for etc, so would be good to close this out.	13/09/2024	Methane is a CoPC for Stage 2 site. The Stage 1 DSI sampled methane in ground gas and did not detect methane in samples analysed. Additional validation sampling is consistent with this. Minor clarification added.	20/09/2024	Closed	15/10/2024
11	pg 7/2.2.1	Can Senversa please briefly summarise the work Senversa did in this section to make sure the site was suitable for mixed commercial/indsutrial across the majority of the site (i.e. updated RBSL's, additional vapour sampling in Parcel 1 etc)	13/09/2024	Additional decsription in new section Section 2.2.2	20/09/2024	Closed	15/10/2024
12	pg 7/2.2.1/bullet 9	Can you re-word the second half of this bullet to clarify that the reference to 'not a place of work or a residential appartment' applies to the basement levels only. The current phrasing is slightly ambiguous.	13/09/2024	This sentence has been updated for clarification.	19/09/2024	Closed	15/10/2024
13	Pg 8/Table 2.2/Stage 1 site surfaces	there is also a paved area to the south of the substation used for carparking + remaining concrete slabs around trees in the north-west of the site	13/09/2024	This section has been updated with additional text	19/09/2024	Closed	15/10/2024
14	Pg 8/Table 2.2/infrastructure	Please also note the removal of sub-surface infrastructure including grease trap, UST etc	13/09/2024	Text added	20/09/2024	Closed	15/10/2024
15	pg 9/table 2-3/hydrogeology	Can Senversa update this hydrogeology section with the latest data for the site, for example, please include: >brief summary of the most recent groundwater elevation data for the site. >note mounding effects being potentially caused by sheet pile wall > mention the current groundwater extraction that is occuring > mention how average groundwater level is presently higher than pre-remediation etc etc (i.e. present an updated apprectiation of groundwater conditions at the site as reported in interim reports)	13/09/2024	Text added to table	20/09/2024	Closed	15/10/2024
16	pg 10/table 2-3/hydrogeology	Can Senversa complete an updated groundwater bore search? The previous search was completed in 2018	13/09/2024	Updated	30/09/2024	Closed	15/10/2024
17	pg 10/section 2.5	Can a simple summary of the pre remediation CSM be presented?	13/09/2024	Section 2.5 updated	20/09/2024	Closed	15/10/2024
18	pg 12/table 3-2	Re: two USTs. This was queried in a previous auditor's comment. Two ust's were noted in earlier reports but only one UST removed? Is this correct?	13/09/2024	Upon excavation of RA7 it was identified that there was only 1 UST located in the area. Text added, and this clarified in Section 4.3.2.	20/09/2024	Closed	15/10/2024
19	pg 16/section 3.7.2/final bullet	Latest groundwater monitoring data indicates that depth to groundwater is quite shallow in some areas. Please present additional justification for discrediting direct contact for intrusive maintenance workers.	13/09/2024	This was assessed in the post-remediation groundwater validation letter. Further discussion added in section.	20/09/2024	Closed	15/10/2024
20	pg 24/table 4-4/tree protection zone	*As shallow soil was able to be assessed in these locations, and reported no exceedances...the sampling density was considered adequate'* - this doesn't appear to be a justified reason to confirm appropriate sampling density. Can you please provide better justification?	13/09/2024	Amended to provide justification of the adequacy of the characterisation rather than sampling density.	20/09/2024	Closed	15/10/2024
21	pg 28/table 4-5/temporary access roadway	Re: zinc and arsenic exceedances of EILs. Is there evidence to support the theory of scrap metal being the source e.g. scrap metals observeved udirng fieldworks or noted on logs?	13/09/2024	Yes - the interim validation letter *Validation of Soils Remaining In-situ Outside of RWP Remediation Areas – Stage 1* describes metal fragments observed in fill. However, as per the updated interim validation letter, logs dont show scrap metal at all sample locations - text updated to note the elevated zinc may be attirbuted to anthropogenic inclusions such as scrap metal or zinc coated paint, rather than strictly scrap metal.	20/09/2024	Closed	15/10/2024
22	pg 30/section 4.3.6	re: only incorporating ecoligical excedances from <2m bgl into statistical calcs. Can you confirm if this means sample data from 2m bgl was included or only data <2m bgl eg 1.9m bgl etc? Also, confirming that Senversa have factored in the final ground levels when determening whether a sample was collected from 2m bgl or lower?	13/09/2024	Amended to less than or equal to 2 mbgl. Yes, Senversa considered these relative to final ground levels.	20/09/2024	Closed	15/10/2024
23	pg 30/section 4.3.6	Can Senversa please clarify if the statistical assessment presented in 4.3.6 has been conducted on data points that remain at Stage 1 post remediation? Please add a line to clarify as it's currently a little ambiguous.	13/09/2024	Updated to state that these were included.	20/09/2024	Closed	15/10/2024
24	pg 37/table 4-12	The wording above the table indicates statistical analysis could not be conducted on TRH >C16-C34 fraction because there were less than 8 inidividual results for this analyte, however, the table indicates there were 1 of **23** samples that exceeded the criterion, can you clarify?	13/09/2024	Updated to state that "only five detections above the LOR were observed and a minimum of eight detections are required for this calculation."	20/09/2024	Closed	15/10/2024
25	pg 44/table 5-1	The auditor has not received imported material reports for Hanson Kulnura Quarry and Boral Dunmore Quarry. Matt Beasley has indicated the inclusion of these source sites may be a mistake, can Senversa please check and update the report accordingly	13/09/2024	Correct, quarry material not received from these sources and have been removed from the report.	20/09/2024	Closed	15/10/2024
26	Figures	With reference to Table 2.6 in NSW EPA (2020) Consultants reporting on contaminated land, please can you include a plan showing areas of residual contamination/Site plan(s) showing the extent of soil and groundwater contamination exceeding remediation criteria for each sampling depth, including identification numbers and depths of all samples analysed (clearly mark concentrations of contaminants remaining on site)	13/09/2024	Refer to new Fgires 13 to 15	20/09/2024	Closed	15/10/2024
27	PID and water quality meter	Please provide callibration certificates for the PID and WQM (if these were hired). If this equipment is owned by Senversa then please provide at least a record of service for each device.	13/09/2024	Added to Appendix G	20/09/2024	Closed	15/10/2024
28	Appendix G	There are various DQI presented in Table 1, Appendix G that haven't been assessed/commented on. For example, can statements be provided against: >standard field sampling procedures and forms used >oversight of fieldworks by experienced field staff >equipment callibrated in accrodance with manufacturer specs >PID daily callibration >NATA accredited methods (please state if all methods used were NATA acredited) >+ all other DQI's listed in this table and within Table 2, Appendix G. The above could be tabulated, and a simple statement added with regards to compliance/non-compliance and a discussion of any deviaitions.	13/09/2024	Appendix G updated	20/09/2024	Closed	15/10/2024
29	Appendix G	Please confirm the adopted decontamination method and confirm compliance	13/09/2024	Appendix G updated		Closed	15/10/2024
30	Appendix G	Please confirm the adopted dup/trip splitting technique for each media type and confirm compliance	13/09/2024	Appendix G updated		Closed	15/10/2024
31	Asbestosclearance	The auditor notes that a stage 1 asbestos clearance was conducted. Can a clearance certificate be provided and attached to the report?	13/09/2024	The RVR descibes the methodology and results of the inspection by a Senversa LAA of the site surface to meet VWP and ASC NEPM requirement for no visible asbestos at the surface. A "clearance certificate" as may be required under workplace laws and regs in NSW has not been provided. The terminology in Section 4.3.4 etc has been amended to better relfect the purpose.	20/09/2024	Closed	15/10/2024
32	Pg 48/Table 7-1	Table 7-1 is titled 'Complete' SPR linkages following remediation. This title is potentially misleading as remediation in most instances means that most S-P-R linkages are incomplete. Please re-word title	17/09/2024	"Complete" removed from table heading.	20/09/2024	Closed	15/10/2024
33	Pg 48/Table 7-1 /first row	Leaching from soil to groundwater is presented under 'Source and pathway prior to remediation' however, is not discussed under the 'residual SPR linkages following remedation' header. Please discuss. Please also include other lines of evidence that support that inhalation of VCHs by future residents is unlikely to be an issue. eg further discussions of conservatisms built into RBSLs etc The preliminary CSM also flags commerciall workers/intrusive maintenance workers as potential receptors to inhalation of VHCs, please also discuss risks to commercial workers	17/09/2024	Updated to include commentary on leaching. Updated to include commentary on commercial workers (IMW already discussed in dedicated row).	20/09/2024	Closed	15/10/2024
34	Pg 49/Table 7-1 /third row	Re: vapour risk in pedestrian link - I wasn't aware that VCH were a CoPC for this area anyway? If this is correct then please add this as a line of evidence to support that there is a low vapour risk to users of pedestrian link	17/09/2024	Updated to clarify this.	20/09/2024	Closed	15/10/2024
35	Pg 49/Table 7-1 /fourth row	Was the pedestrian link audit area excavated to **4.5m bgl**? Previous reports indicated less than this? This text appears to be a C+P of the park area wording. Please update and make specific for northern portion of pedestrian link	17/09/2024	Amended.	20/09/2024	Closed	15/10/2024

36	Pg 49/Table 7-1	Vapour inhalation risk to intrusive maintenance workers within the Stage 1 park area is not mentioned in the table	17/09/2024	This had already been described in Row 3 'Intrusive Maintenance Workers', however the text has been modified to improve clarity.	20/09/2024	**Closed**	15/10/2024
37	Pg 50/Table 7-1	Please provide further justification with regards to why the depth to groundwater precludes ongoing/regular direct contact for intrusive workers at the site? The HHERA assumed excavations would extend to a maximum depth of 2m bgl (but would generally be significantly shallower) with most services expected to be installed within the top 1m. The HHERA also assumed that average groundwater depth across the site was 2m bgl (but generally greater) and the HHERA assumed the site topography would be raised in some areas. Some of these assumptions are potentially no longer accurate, eg deeper excavation depths are potentially planned and average groundwater levels are higher than at the time of the HHERA. Will groundwater be interacted with during the planned excavations for stormwarer pipe installation within the ped link? Why will intrusive workers not be exposed to groundwater in future deep basement excvavations? Please add these details to the revised CSM. Wouldn't the key justification for supporting that groundwater is a low risk to intrusive workers be that be the chemical data? but this hasn't been mentioned? Has groundwater been compared to appropriate criteria to assessdirect contact risk to intrusive maintenance workers?	17/09/2024	This may require discussion with the auditor to clarify the intent of the comment - i.e. completeness of CSM presented or a question on risk? Many of these questions relate to the exposure assesment and assumptions in the HHRA, which have not changed. Senversa has assessed potential changes to exposure scenarios assumed in the HHRA - which principally relate to the southern part of the Stage 1 site (Parcel 4), where the water table is shallower, due to slightly higher elevation water table observed during post-remediation validation. However, 'deep basement excavations' will necessitate dewatering to facilitate construction, and limited exposure to groundwater is anticipated, and the text has been updated to reflect this. Please also refer to response to comment #19. Note: - No groundwater was encountered in the pedestrian link excavation, which is below the expected depth needed for stormwater drainage - depth to water is circa 3-4 m bgl in this area. - The HHRA qualitively assessed the direct contact exposure scenario for basement users/workers.	30/09/2024	**Closed**	15/10/2024

38	Pg 50/Table 7-1	For completion, please add footnote/sub section discussing why groundwater ecological receptors have not been considered	17/09/2024	This was previously discussed in the RAP and discounted as a potential receptor due to demonstrated negligible risk from VCH.	20/09/2024	Closed	15/10/2024
39	Pg 8/Table 2-2	Please include surrounding site uses in table	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
40	Pg 8/Table 2-2/Stage 1 site surfaces	Please provide reference to Figure 11 to highlight the locations of the retained slabs	17/09/2024	Reference to Figure 11 has been added.	19/09/2024	Closed	15/10/2024
41	Appendices	Please include the survey plan which shows the spot heights for the site (as is presented in other reports)	17/09/2024	Included in Appendix L (along with registered cadastral survey plan)	20/09/2024	Closed	15/10/2024
42	pg 12/table 3-2	Please provide the differences in m2/m3 between the preliminary remediation extents and the revised remediation extents	17/09/2024	The final remediation extents are provided within each of the subsections in Subsections in 4.3. No update to text proposed.	20/09/2024	Closed	15/10/2024
43	pg 13/section 3.3	Please add importation of VENM to bullets	17/09/2024	This section has been updated with additional text	19/09/2024	Closed	15/10/2024
44	pg 13/Section 3.4	Please ensure DQO's are referred to and discussed in conclusions	17/09/2024	Discussion of the decisions in the DQOs is provided in Section 8.1	20/09/2024	Closed	15/10/2024
45	pg 14/Section 3.5	Should sampling of base and walls of excavations be included as one of the bullet points beneath, 'Following completion of remediation excavations'	17/09/2024	Yep, good point. Text updated	20/09/2024	Closed	15/10/2024
46	pg 15/Section 3.7.1	Re: the use of the term 'generic land use' - the land use change was not so much to a generic land use, but more to do with the fact that the footprints of buildings/road/southern portion of pedestrian link could differ from those in the DA.	17/09/2024	Noted. This really just refers to use of Tier 1 criteria in NEPM for analytes other htan VCHs and BaP. However, text has been updated where relevant.	20/09/2024	Closed	15/10/2024
47	pg 19/section 4.3.1	Reference to table 3-4 is incorrect, should be table 4-2	17/09/2024	This has been amended.	19/09/2024	Minor type still remains, however, the auditor considers this to be acceptable.	15/10/2024
48	pg 18/Table 4.1/RA11	Fill based?	17/09/2024	Sentence completed	20/09/2024	Closed	15/10/2024
49	pg 18/Table 4.1/RA11	reinstatement of some site won materials... from where?	17/09/2024	This is described in Section 4.3.5 (e.g. as per other excavations/areas).	20/09/2024	Closed	15/10/2024
50	pg 18/Table 4.1/RA2	Targetted excavation of VCH impacted soils - please reference where this is discussed further	17/09/2024	References added	20/09/2024	Closed	15/10/2024
51	pg 19/Table 4-2/RA11	...to the extent practicable and **safe.**	17/09/2024	Text has been updated within this section.	19/09/2024	Closed	15/10/2024
52	pg 20/Table 4-2/tree protection zone	Rerference the relevant figure	17/09/2024	Updated	20/09/2024	Closed	15/10/2024
53	pg 20/Table 4-3/	Why are the remedial extents approximate? Most were surveyed?	17/09/2024	The remedial extents are as described in the IVRs. No update made, for consistency with previously reported areas.	30/09/2024	Closed	15/10/2024
54	pg 22/Table 4-3/slab removal	Would be useful to have a statement on how much ACM impacted soil was found	17/09/2024	Updated		Closed	15/10/2024
55	pg 23/Table 4-4/RA7 and RA12	1300m2 for RA7 and RA12 is referenced in Table 4.3/pg 21	17/09/2024	Table 4-4 updated to be consistent with table 4-3.	30/09/2024	Closed	15/10/2024
56	pg 23/Table 4-4/RA11	This is not considered to impact the validation of RA11 - why?	17/09/2024	Updated	20/09/2024	Closed	15/10/2024
57	pg 24/table 4-4/temporary access roadway	As discussed with Senversa, additional reasoning should be presented with regards to residual asbestos risk beneath the retained road	17/09/2024	Updated	30/09/2024	Closed	15/10/2024
58	pg 28/table 4-5/groundwater	Please add statement around the fact that the MO will remain in place until VCH is controlled	17/09/2024	Text added.	20/09/2024	Closed	15/10/2024
59	pg 29/table 4-5/Outstanding	what is meant by 'low concentrations' of ACM?	17/09/2024	Updated		Closed	15/10/2024
60	pg 29//4.3.5	reference to table 4-11 is incorrect	17/09/2024	This has been amended.	19/09/2024	Closed	15/10/2024
61	pg 29/Table 4-6/RA7 and RA12	Please provide additional information describing how stockpiles were treated (or reference a section which describes this)	17/09/2024	Reference provided.	20/09/2024	Closed	15/10/2024
62	pg 29/Table 4-6/RA11	How were un-treated fines originating from the WTP tested and approved for re-use? Can further information be added/reference to a section/report	17/09/2024	Reference provided.	20/09/2024	Closed	15/10/2024
63	pg 30/section 4.3.6	Senversa could adopt the LOR as a detection for calculation of 95% UCL?	17/09/2024	Substitution of the LOR or half LOR is not a recommended statistical method, as it introduces bias into the dataset (which invalidates systematic sampling design), and would have no statistical value. Use of lines of evidence (e.g. frequency of detection, mean, depth) is considered more appropriate.	30/09/2024	Closed	15/10/2024
64	pg 30/final paragraph	PCE was a key driver for remediaiton of some portions of the site but not all. This statement should be re-worded	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
65	General	Please correct discrepancy between use of 'SRW and SDW'	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
66	Table 4-7 and 4-8	It was the auditor's understanding that Senversa considered the exceedances wihtin the boundry between Stage 1 to be located off-site. Therefore, it doesn't make sense to include these samples within the statistical assessment. Please update Table 4-7 and Table 4-8 and associated text accordingly. Also, given that the substation and exlcusion zone is now excluded from the audit, it may be prudent to add a statement in this section about this exclusion.	17/09/2024	Inclusion of these samples in the statistical review for the area is considered a conservative approach given the that large proportion of exceedances were reported at the site boundary. The substation and substation exclusion zone are now contained within a separate section (Substation Audit Area - Secton 4.6) for clarity. The data from the substation has been removed from the statistical analysis for the main audit area.	30/09/2024	Closed	15/10/2024
67	Section 4.3, 4.4 and 4.5	Can Senversa reference the relevant figure that defines the main audit area (under the section 4.3 heading), the recreation audit area (under the section 4.4 heading) and the 'pedestrian link audit area' under the seciton 4.5 heading.	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
68	Pg 34/Section 4.3.7	If these areas are not considered to be within the site then the results should not be considered as part of the statistical analysis conducted in previous sub section	17/09/2024	Inclusion of these samples in the statistical review for the area is considered a conservative approach given the that large proportion of exceedances were reported at the site boundary.	20/09/2024	Closed	15/10/2024
69	pg 35/section 4.4	Please direct the reader to the figure which shows sample locations in the recreational audit area	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
70	pg 36/table4-10/Excavation surfaces	Please state how many validation samples were collected from the base and what they were analysed for	17/09/2024	Text updated	20/09/2024	Text still appears to have not been updated, however, the auditor is satisfied that this element has been discussed in other sections of the report	15/10/2024
71	pg 36/table4-1/re-instatement	The depths of backfill presented in this row appear to be inconsistent with the depths presented in Table 4-11. Please check and update	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
72	pg 37/4.4.6/final sentence regarding 95% UCL for TRH	This sentence doesn't make sense. Please re-word/remove if not required	17/09/2024	Removed	20/09/2024	Closed	15/10/2024
73	pg 39/table 4-14	*'It is understood that Council prefers a minimum of 1.5m of clean soil to enable the area to be managed without the requirement of an EMP'* - please can you provide a reference for where this information has been sourced?	17/09/2024	This is in the RAP and understood to have come from Council correspondace during RAP development.	20/09/2024	Closed	15/10/2024
74	pg 40/table 4-14/asbestos clearance	Is the asbestos clearance even relevant to the pedestrian link if the entire area was backfilled with VENM?	17/09/2024	Some text added to note that no observations of ACM noted for this area, which was the expected outcome given that VENM was reinstated in the area. Given that the clearance was undertaken across this area, reference to the walk over remains for completeness.	20/09/2024	Closed	15/10/2024
75	pg 41/section 4.5.7 (also in other locations)	Please confirm title of EMP/AMP/passive EMP and update reference to it throughout report	17/09/2024	Reference added to reference list and referred to throughout	20/09/2024	Closed	15/10/2024
76	pg 42/4.6	Please append the survey plan which shows final spot heights for site and reference the appendices in this section	17/09/2024	Text updated, and survey data (elevation and boundaries) provided as Appendix L	20/09/2024	Closed	15/10/2024
77	43/section 5.1/2nd bullet	Please just add to second bullet clariying that the tretament was for VCH only	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024
78	pg 51/Table 7-1/terrestrial ecology/recreational audit area	re: *'with the top 1m reinstated with soil validated as suitable for recreational/public open space use'*. Ok, but is the soil suitable as a growing medium for plants?	17/09/2024	Text updated	20/09/2024	Closed	15/10/2024

Pedestrian Link Long Term Environmental Management Plan (Asbestos Management Plan). REV 0. 16 September 2024.

Comment no.	Location in Document	Auditor's comment	Comment Dates	Consultant Responses	Comment Dates	Auditor Comments	Comment Dates
1	1.1/introduction	NSW planning portal + nearmaps indicates that the address for the pedestrian link is 881-885 Bourke Street Waterloo NSW 2017 Australia	17/09/2024	Section 1.1 and Table 1.1 have been updated.	20/09/2024	Closed	20/09/2024
2	1.1/introduction	re: approximate area. Please provide the final area based on survey data. to this end a surveyed plan (with coordinates of vertices of the polygon) is required.	17/09/2024	A survey plan has been added as Figure 5, and Section 1.1 has been updated.	20/09/2024	Closed	20/09/2024
3		Re: remediated to meet RAP requirements - previous reports indicated that the ped link was never planned to be remediated, just concrete slabs stripped. Remediation was driven by unexpected asbetsos finds in the area?	17/09/2024	Section 1.1 has been updated.	20/09/2024	Closed	20/09/2024
4		It is recommended that (perhaps linked to the final paragraph) for the use of the site as a pedestrian link and/or minor works by council or it's contractors/utility providers that do not require excvation to depths of greater than 0.9 m - or to an RL of **x,** no actions are required. This could be in bold type.		Section 1.1 has been updated.	20/09/2024	Closed	20/09/2024
5	Section 1 and Section 2	Given remediation of this area was not presented in the RAP issued to Council as part of the development application, it would be prudent to include a statement in the introduction which provides a general summary of events and gives better context for why the EMP is required. Eg, the pedestrian link was not planned to be remediated, then, during slab excavation and test pitting, some locations were shown to be grossly impacted with asbestos - then reference to Section 2 which provides further detail - such as the affected material was excavated to the extent practicable (based on the stability issues associated with adjacent buildings) - but based on advice from engineers and based on the presence of building foundations within the xx and xx area to xx depth, no further excavation could be safely undertaken. Validation samples that reported AF/FA should be shown on FIgure 2. It is hard to distinguish in FIgure 2 the different colours used for 2 metre and 2.5 metre depths. The proposed stormwater pipe works should also be mentioned, noting that these works will not disturb the underlying fill. It would also be beneficial to emphasise that air quality monitoring during the fill excavation did not record any asbestos greater than 0.01 fibres/mL.	17/09/2024	Section 1.1 has been updated. Figure 2 has been revised (2.5m depth removed).	20/09/2024	Closed	20/09/2024
6	Section 2.2/final paragraph	what does 'low levels' of bonded asbestos mean?	17/09/2024	Section 2.2 has been updated.	20/09/2024	Closed	20/09/2024
7	Table 2.1	RL information for the marker layer should be provided as the level of the surface may change.	17/09/2024	Table 2.1 has been updated.	20/09/2024	Closed	20/09/2024
8	Section 2.5	The phrase *residual soil, were there intrusive* should read *if instrusive works extend....*		Section 2.5 has been updated.	20/09/2024	Closed	20/09/2024
9	Figures	There needs to be a figure presented which clearly shows the remaining HSL exceedances for asbestos, as well as the locations where asbestos was detected but below HSLs	17/09/2024	Figure 3 has been added.	20/09/2024	Closed	20/09/2024
10	Figures]	Please include figure (which has been provided with another Senversa report) which shows the extent of the geofabric	17/09/2024	Figure 4 has been added.	20/09/2024	Closed	20/09/2024
11	General	Please check through the EMP template sent to Senversa by the auditor and confirm all elements have been included/addressed	18/09/2024	Noted. Additional text has been added through the LTEMP.	20/09/2024	Closed	20/09/2024

24 February 2021

Jeff Eisman
Jeffman Pty Ltd
Suite 603, 180 Ocean Street
Edgecliff NSW 2027

Our ref:2128078 LET_IAA05_DSI and RAP_rev 1
Your ref:

Dear Jeff

Jeffman - Danks Street South Precinct, Waterloo, NSW
Interim Audit Advice 05

1 Introduction

Andrew Kohlrusch of GHD Pty Ltd (the auditor) has been engaged by Jeffman Pty Ltd (Jeffman) to act as the accredited site auditor for the Jeffman properties (Lots A and B in DP 438772, Lot 1 in DP 89250, Lot 3 in DP 775039 and Lot 4 in DP 600884) located in Waterloo, NSW (the Jeffman Properties).

The Jeffman Properties are the subject of Management Order 2011403. In 2010, Jeffman commissioned AECOM and then Senversa to undertake remedial works of the contaminated groundwater, primarily through Enhanced In-Situ Bioremediation (EISB). The chemicals of concern (i.e. the Significant Contaminants listed in the Management Order) are chlorinated hydrocarbons, including tetrachloroethene (PCE), trichloroethene (ICE), dichloroethene (DCE), and vinyl chloride (VC). It is understood that EISB remediation and monitoring is ongoing as per the Adaptive Management Strategy Remedial Action Plan (AECOM RAP 2011). While the Significant Contaminants as listed in the Management Order are recognised as the most significant contamination issue on the site, as part of the proposed redevelopment of the site there has additional work conducted to characterise the presence of other areas and/or chemicals of concern.

2 Background

To address this data gap, the following preliminary site investigation (PSI) of the site was prepared by Senversa;

- *Preliminary Site Investigation Jeffman Danks Street, South Precinct* 4 March 2019 (the **PSI**)

On the basis of the findings in the PSI, Management Order requirements, the AECOM RAP (2011), the proposed nature of the development and other relevant documentation, an overarching Remedial Action Plan was prepared by Senversa;

- *Overarching Remediation Action Plan Jeffman Danks Street, South Precinct, Waterloo, NSW* 3 September 2019. (the **ORAP**)

The ORAP supported the Development Application (DA D/2020/45) submitted to City of Sydney for the proposed subdivision of the site, which is to comprise a mix of residential, commercial, roadways and public open space uses as part of the Danks Street South Precinct. The DA also included the demolition

of the existing buildings to ground surface followed by the remediation as outlined in the ORAP to make the site suitable for the proposed land uses.

City of Sydney assessed the DA and identified some issues or inconsistencies in the information and documentation, some of which were related to requests for further information in relation to the ORAP. To address matters raised by City of Sydney, in 2019 Senversa completed a detailed investigation (DSI), including site-wide groundwater monitoring events (GME) in June/July 2019 and October to December 2019. The findings of the DSI are reported in:

- *Detailed Site Investigation Jeffman Danks Street, South Precinct, Waterloo NSW* September 2020. (the **DSI**)

Based on the completion of the DSI, Senversa prepared a site wide Remedial Action Plan, taking into account the scope outlined in the ORAP and the proposed scale of the redevelopment presented in the DA:

- *Remedial Action Plan, Jeffman Danks Street, South Precinct, Waterloo NSW* December 2020 (the **RAP**)

This RAP sets out the remediation and validation requirements to:

- Make the site suitable for the proposed land uses in the development application (DA) D/2020/45 lodged by Jeffman with the City of Sydney.
- Address remaining remediation at the Source Site required under Management Order (number 20111403) issued by the Land and Environment Court (LEC) under the *Contaminated Land Management Act 1997* (CLM Act).

3 Auditor review and commentary on DSI and RAP

The auditor reviewed both the DSI and RAP to evaluate whether they have addressed data gaps in the ORAP and have been prepared in a manner consistent with guidelines made or endorsed by NSW EPA including *Guidelines for the NSW EPA Site Auditor Scheme 3rd Edition*, *Guidelines for Consultants Reporting on Contaminated Sites*, *Guidelines for the Assessment and Management of Groundwater Contamination* and the NEPM (2013) *National Environment Protection Measure (Assessment of site contamination) 1999*. Following the review of the DSI and RAP, the auditor prepared an Interim Audit Advice 04 spreadsheet with comments on both documents. Senversa considered the auditor comments and updated the DSI and RAP as follows:

- *Detailed Site Investigation Jeffman Danks Street, South Precinct, Waterloo NSW* 17 February 2021.
- *Remedial Action Plan, Jeffman Danks Street, South Precinct, Waterloo NSW* 19 February 2021

The auditor has reviewed the updated DSI and RAP to evaluate whether they have addressed the comments and queries raised in Interim Audit Advice 04 (IAA04), and whether they are considered appropriate. While the majority of comments in IAA04 have been addressed, there are some matters that require explanation and/or further information. The comment spreadsheets are provided as Attachment A.

4 Concluding statement

This letter should be regarded as interim advice to the overall review and site audit process and should not be considered a Site Audit Statement or a Site Audit Report under the CLM Act 1997. This interim audit advice letter will subsequently be referred to and provided as an Annex to the final Site Audit Statement and Site Audit Report.

If you have any further queries, please do not hesitate to contact the undersigned directly on 9239 7187.

Sincerely
GHD



Andrew Kohlrusch

Senior Technical Director – Contamination and Remediation
+61 2 92397187

Encl. Auditor commentary spreadsheet on DSI and RAP (attached via email)

133 Castlereagh Street, Level 15
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Australia
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Your ref: IAA06
Our ref: 2128078

28 October 2022

Jeff Eisman
Jeffman Pty Ltd
Suite 603, 180 Ocean Street
Edgecliff NSW 2027

Jeffman Danks Street South Precinct, Waterloo, NSW Interim Audit Advice 06

Dear Jeff,

1. Background

Andrew Kohlrusch of GHD Pty Ltd (the auditor) has been engaged by Jeffman Pty Ltd (Jeffman) to act as the accredited site auditor for the Jeffman properties (Lots A and B in DP 438772, Lot 1 in DP 89250, Lot 3 in DP 775039 and Lot 4 in DP 600884) located in Waterloo, NSW (the Jeffman Properties).

The Jeffman Properties are the subject of Management Order 2011403. In 2010, Jeffman commissioned AECOM and then Senversa to undertake remedial works of the contaminated groundwater, primarily through Enhanced In-Situ Bioremediation (EISB). The chemicals of concern (i.e. the Significant Contaminants listed in the Management Order) are chlorinated hydrocarbons, including tetrachloroethene (PCE), trichloroethene (ICE), dichloroethene (DCE), and vinyl chloride (VC). It is understood that EISB remediation and monitoring is ongoing as per the Adaptive Management Strategy Remedial Action Plan (AECOM RAP 2011). While the Significant Contaminants as listed in the Management Order are recognised as the most significant contamination issue on the site, as part of the proposed redevelopment of the site there has additional work conducted to characterise the presence of other areas and/or chemicals of concern.

2. Proposed development

The site is proposed to be redeveloped for residential, commercial, roadways and public open space uses under an integrated concept development application (DA) D/2020/45 lodged by Jeffman with the City of Sydney.

Remediation of the site is required to make the site suitable for the proposed use and meet requirements of Management Order (number 20111403). A Remedial Action Plan (RAP) (Senversa, Feb 2021b) was developed to document the remediation goals, remediation steps to achieve these goals and identify requirements to complete the remediation in an environmentally acceptable manner. The integrated concept DA D/2020/45 lodged by Jeffman comprises demolition, remediation and subdivision of the site into:

– Four development portions (Parcels 1 to 4) of residential/commercial buildings with basements.

– Public domain areas (roadways, a pedestrian walkway and park) designated to City of Sydney.

Relevant plans from the DA showing the subdivision, staging and building envelopes are provided in the RAP. The subdivision is proposed to be conducted in two stages:

– Stage 1 – part Lot 3 Young Street site (excluding the Source Site) and western part of Lot 4 Bourke Street. Includes development Parcel 1, Parcel 4 and roads / shared ways / pedestrian links.
– Stage 2 - remaining portions of the site (Source Site and eastern part of Lot 4 Bourke Street) includes Development Parcel 2, Parcel 3, a road and a park.

3. Documents reviewed for Interim Audit Advice 06

The RAP identified data gaps that require addressing prior to remediation in the Stage 1 area. Senversa is engaged to address these data gaps, and the auditor has reviewed the following Senversa documents in relation to the Stage 1 area:

– *DRAFT Detailed Site Investigation Stage 1 Jeffman Danks Street, South Precinct, Waterloo NSW* 17 August 2022 (the DSI)
– *DRAFT Human Health Risk Assessment, Jeffman Waterloo Development NSW* 25 August 2022 (the HHRA)

The auditor reviewed the above documents to evaluate whether they have addressed data gaps outlined previously in the *Remedial Action Plan, Jeffman Danks Street, South Precinct, Waterloo NSW* December 2020 (the RAP), and have been prepared in a manner consistent with guidelines made or endorsed by NSW EPA including Guidelines for the NSW EPA Site Auditor Scheme 3rd Edition, Guidelines for Consultants Reporting on Contaminated Sites, *Guidelines for the Assessment and Management of Groundwater Contamination* and the NEPM (2013) *National Environment Protection Measure (Assessment of site contamination)* 1999. The Interim Audit Advice 06 comments are provided in the IAA06 spreadsheet.

In conjunction, Senversa has also prepared the following technical memorandum

– *Technical Memorandum Re: Revision of RAP Remediation Extents in Stage 1 area* 29 September 2022

This memorandum presents the refined remediation extents for the Stage 1 area based on the preliminary extents and information in the RAP, together with the DSI and HHRA data and findings.

3.1 Overall auditor comments

During the DSI restrictions on the extent of investigation due to buildings, structures and/or tenant operations were encountered. Further sampling following demolition or during validation will be required, as outlined in the RAP and SAQP. The uncertainty in the extent of VCHs at the eastern extent of RA2 and in sandy clays underlying Botany Sands within RA2 will also need to be considered in the RWP and addressed during validation. Overall, the DSI data should be consolidated with data in the RAP and used to develop the RWP and RVP. These plans should consider the remaining uncertainties.

The Technical Memorandum has not been reviewed in its entirety, and further comments may be forthcoming. However, the overall approach for the revision of RAP remediation extents were considered, and comments are provided in the IAA06 spreadsheet.

4. Conclusions

This letter should be regarded as interim advice to the overall review and site audit process and should not be considered a Site Audit Statement or a Site Audit Report under the CLM Act 1997. This interim audit

advice letter will subsequently be referred to and provided as an Annex to the final Site Audit Statement and Site Audit Report.

If you have any further queries, please do not hesitate to contact the undersigned directly on 9239 7187 or Jessica Hannaford.

Regards



pp
Andrew Kohlrusch
Site Auditor

+61 2 92397187
andrew.kohlrusch@ghd.com

Copy to: Senversa, McNally Management

Encl. Auditor commentary spreadsheet on DSI, HHRA and Tech Memo

133 Castlereagh Street,
Sydney, NSW 2000
www.ghd.com

Your ref:
Our ref: 2128078

21 June 2023

Jeff Eisman
c/- Francoise Raymond - McNally Management]
via email

Auditor commentary – Senversa Technical Memorandum 19 May 2023

Dear Jeff

1. Introduction

Andrew Kohlrusch of GHD Pty Ltd (the auditor) has been engaged by Jeffman Pty Ltd (Jeffman) to act as accredited site auditor for the Jeffman properties (Lots A and B in DP 438772, Lot 1 in DP 89250, Lot 3 in DP 775039 and Lot 4 in DP 600884) located in Waterloo, NSW (the Jeffman Properties or the site).

A remedial action plan (*Remediation Action Plan, Jeffman Danks Street South Precinct, Waterloo NSW)* prepared by Senversa (February 2021) outlines the remediation to be conducted at the Jeffman Properties. The RAP is to render the site suitable to the proposed land uses as defined in the DA (D/2020/45) issued by City of Sydney and to address contamination (comprising chlorinated solvents) present at the Lawrence Dry Cleaners (LDC) facility (Lots A and B in DP 438772, Lot 1 in DP 89250).

The remedial works are to be conducted in two stages, the first stage (Stage 1) to comprise Parcels 1 and 4 and land to be dedicated to Council and Stage 2, to comprise Parcels 3 (LDC) and 2 (to the immediate north of LDC) – Attachment 1.

Of note, the RAP identified that a key step in delivering the remediation was to conduct further site characterisation works associated with each parcel, the results of which were to be used to refine (if necessary) the extent of remediation – and to be documented in a remedial works plan (RWP). To this end, Senversa completed a data gap assessment program of Stage 1 in 2022 (*Detailed Site Investigation – Stage 1, Jeffman Waterloo Development, Waterloo NSW* – DSI Stage 1). Remedial extents in Stage 1 were modified on the basis of information collected in the DSI Stage 1, but it was acknowledged that further sampling of soil and soil vapour was required in areas that were inaccessible during the DSI Stage 1. The outcome of the further sampling has been presented in the following document prepared by Senversa:

– *Technical Memorandum* (S19142_019_MEM_Rev0) issued on 19 May 2023 (the 2023 Technical Memorandum).

This interim audit advice is based on a review of the 2023 Technical Memorandum and has also considered relevant information in the following Senversa documents (collectively referred to as Previous Reports):

– *Remediation Action Plan, Jeffman Danks Street South Precinct, Waterloo NSW* (2021) – the RAP
– *Detailed Site Investigation – Stage 1, Jeffman Waterloo Development, Waterloo NSW* (2022) – DSI Stage 1

– *Revision of RAP Remediation Extents in Stage 1 Area*. Technical Memorandum (2022) – Stage 1 Revision Memo.

2. Auditor review and commentary

2.1 Auditor review

In preparing this interim audit advice, the auditor has considered whether the 2023 Technical Memorandum has been prepared in a manner consistent with guidelines made or endorsed by NSW EPA including *Guidelines for the NSW EPA Site Auditor Scheme 3rd Edition* (2017), *Guidelines for Consultants Reporting on Contaminated Sites* (2020) and NEPM (2013) *National Environment Protection Measure (Assessment of site contamination)1999*.

The 2023 Technical Memorandum presents the outcome of a soil and soil vapour assessment program conducted in March 2023 in Stage 1 (including development Parcels 1 and 4 and the proposed roadway and park, both of which are to be dedicated to Council). The scope of work and justification for the sample locations, analytes and methodology was outlined in:

– *Sampling and Analysis Quality Plan, Jeffman Danks Street South Precinct, Waterloo NSW* (2022 – the SAQP).

Given that there were some residual data gaps in site characterisation (primarily owing to site access constraints), the problem statement in the Data quality objectives (DQOs) section of the SAQP was *Implementation of this SAQP will obtain key data to address the data uncertainties and refine remediation and validation design.*

The auditor considered that the scope was consistent with that outlined in the SAQP and allowed the collection of information to address potential data gaps identified in the Previous Reports. The 2023 Technical Memorandum included key elements as required by the NSW EPA for a site characterisation report including site figures, bore/test pits logs, data tables and an evaluation of data quality.

Data quality objectives (DQOs) and a conceptual site model were not included in the 2023 Technical Memorandum. The auditor acknowledged however that the DQOs were defined in the SAQP and that the 2023 Technical Memorandum clearly outlined how the data collected was used in responding to the problem statement in the SAQP DQOs. Further, while a CSM was not presented, the 2023 Technical Memorandum communicated how the data was used to refine the understanding of the extent and type of remediation at previously identified remedial areas (as defined in the RAP and Stage 1 Revision Memo.

Data were compared to investigation levels previously selected to assess the suitability of site soils and/or site vapour, including risk based screening levels (RBSLs) generated as part of a human health risk assessment. Chlorinated solvents were not found at concentrations in excess of nominated, relevant investigation in any of the soil samples, but were identified in some soil vapour samples at concentrations greater than some of the nominated RBSLs. Senversa presented an evaluation in relation to the existing remedial extents based on the data collected as part of this program and previous assessment stages. Asbestos cement fragments were found in some soil samples, in areas where fill was present.

2.2 Commentary

The key outcomes of the works completed in March 2023, along with auditor commentary are as follows:

– No changes to remedial extents in Parcel 1 were proposed by Senversa. The data confirmed a previous evaluation of remedial extents (as presented in Stage 1 Revision Memo) that remediation of Remediation Area 1 was not warranted. The auditor concurred with Senversa's evaluation that remediation of Remediation Area 1 within Parcel 1 was not warranted given the soil, soil vapour and

groundwater data collected in and in the vicinity of Remediation Area 1 and consideration of the RBSLs and the two storey basement that is planned for Parcel 1.

– Senversa recommended that Remediation Area 2 (in Parcel 4) should be extended to the east to the boundary of Stage 1/Stage 2. Senversa recognised there is some variability in data sets (in particular groundwater and soil vapour) and while there may be some soils/groundwater within the zone that do not require remediation, extension of RA2 will offer greater surety of achieving remedial goals – including control of flow of contaminated groundwater from adjacent source areas. Senversa's suggested approach should provide delivery efficiencies and mitigate the potential for migration of contaminants into future basement areas. To this end, the auditor is aware that the remedial contractor will install a sheet pile wall along the Stage 1/Stage 2 boundary to control groundwater flow to the south and west of Stage 2 – with subsequent monitoring. The approach should take also into account the identified temporal (in particular in relation to soil vapour and groundwater data) and spatial variability (with respect to soil quality) that is to be avoided in relation to subsequent site validation.
– Asbestos was found at additional locations and Senversa recommended that the Contractor will need to develop an approach to avoid mixing ACM with soil that will be subject to power screening as part of the treatment of chlorinated solvent contaminated soils in Remediation Area 2. The auditor also noted that the identification of ACM was in areas where it had not previously been found and that the approach to be prepared by the Contractor should extend to any areas where fill may be present in Stage 1. The removal of the concrete/bitumen hard stand at the completion of the remedial works in Stage 1 will provide an opportunity to assess and if necessary, test the quality of the underlying fill. The auditor noted that the Remedial Works Plan (subject to separate auditor review) has a provision to at a minimum conduct a visual inspection for the presence of ACM following slab removal.

3. Concluding statement

The auditor notes that this interim audit advice is related to characterisation and refined remedial extents within Stage 1 of the development of the Jeffman Properties. Unexpected finds (particularly once the concrete and/or other hardstand is removed from Stage 1) may require additional responses to those listed in the RAP to render an area or areas suitable for proposed land use(s).

This letter should be regarded as interim advice to the overall review and site audit process and should not be considered a Site Audit Statement or a Site Audit Report under the CLM Act 1997. This interim audit advice letter will subsequently be referred to and provided as an Annex to the final Site Audit Statement and Site Audit Report.

If you have any further queries, please do not hesitate to contact the undersigned directly on 9239 7187.

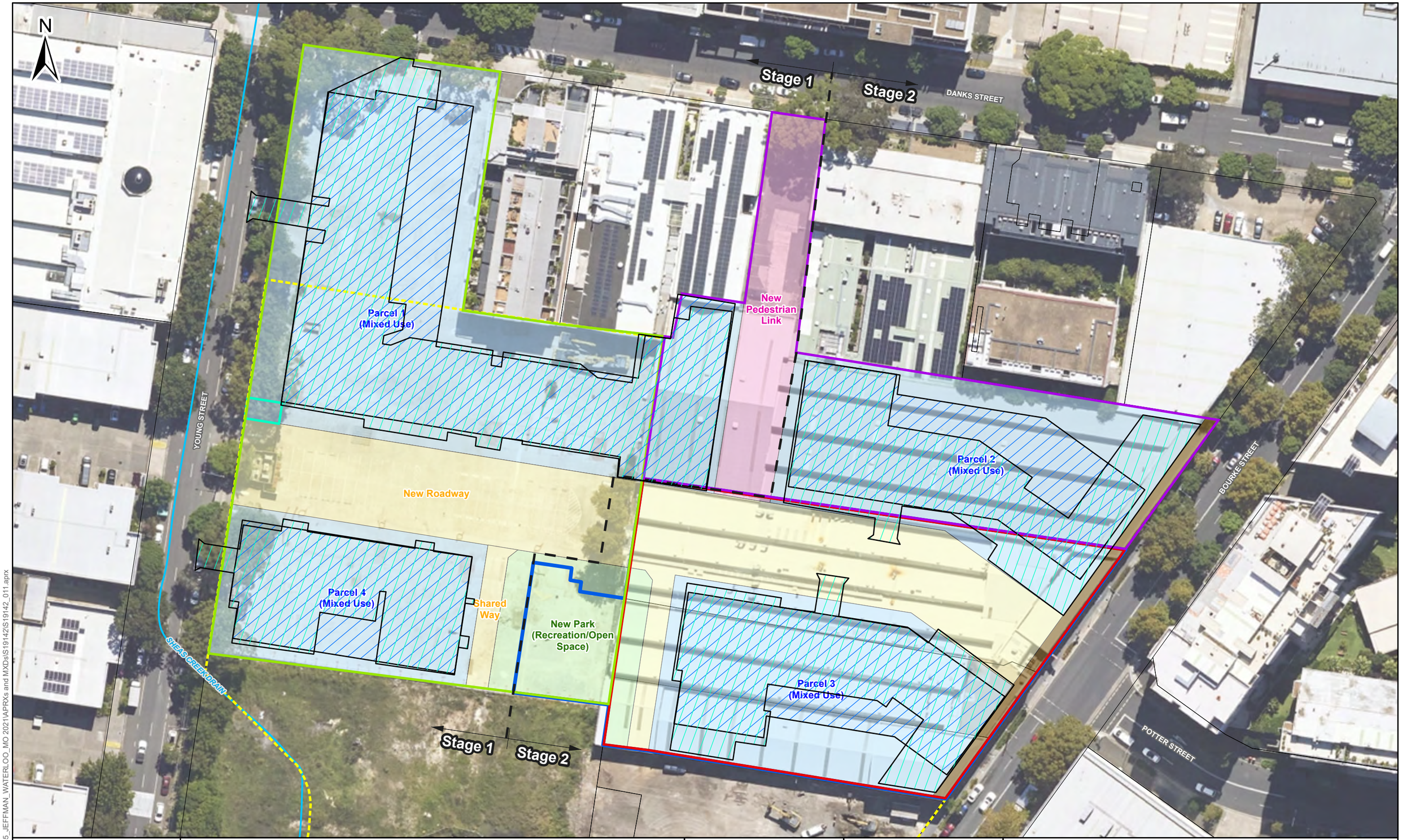
Regards



Andrew Kohlrusch
NSW EPA Site Auditor

9239 7187
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Attachment 1 – Site layout, showing Stage 1 development parcels



senversa

Legend

- Remediation Site (MO Notice Number 20111403)
- Source Site (MO Notice Number 20154405)
- Lawrence Dry Cleaners
- Lot 3 Young Street
- Lot 4 Bourke Street
- Proposed Substation

Development Land Use

- Parcel (Mixed Use)
- New Road
- New Park (Recreation/Open Space)
- New Pedestrian Link
- Future Footpath Easement

Development Footprint

- Basement Footprint (01-03)
- Ground Floor Footprint
- Lot Boundary
- Sheas Creek Drain

Notes:
Aerial Imagery (17/03/2023) © Metromap
Development Footprints are approximate

Created:	M. Black	Date:	17/05/2023
Reviewed:	A. Woinarski	Revision:	0
Approved:	A. Woinarski	Scale:	1:800 (A3)
File:	S19142_011_F003_Basement GroundFloor Overlay		

0 5 10 20 30 40 Metres

Coordinate System: GDA 1994 MGA Zone 56

Figure No: 3

Title: Overlay of Basement and Ground Floor Footprints

Project: Stage 1 Remediation

Location: 887 Bourke Street, Waterloo, NSW

Client: Jeffman Pty Ltd

Path: S:\01_Jobs\1.NSW_Jobs\S11445_JEFFMAN_WATERLOO_MO 2021\APRXs and MXDs\S19142\S19142_011.aprx

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