FEBRUARY 2025 MONITORING EVENT REPORT - DAYLESFORD LANDFILL

Hepburn Shire Council

10/04/2025

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COMMERCIAL IN CONFIDENCE

Issue/Rev	Date	Revision Description	By	Checked	Approved
Report 1.0	1/04/2025	Draft	Anastasia Wiltshire and Lucy Edwards	Lucy Edwards	Bryan Woods
Report 1.1	10/04/2025	Final	Anastasia Wiltshire and Lucy Edwards	Lucy Edwards	Bryan Woods

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EXECUTIVE SUMMARY

Ventia Utility Services Pty Ltd has been engaged by the Hepburn Shire Council to undertake groundwater and leachate monitoring and reporting at the Daylesford landfill site. This report summarises the major findings of the February 2025 monitoring event and provides further interpretation of results.

The current monitoring program is required to satisfy specific environmental conditions as requested by the Hepburn Shire Council. The annual program is comprised of biannual groundwater and leachate bore monitoring. The monitoring network consists of four groundwater bore monitoring locations and one leachate bore monitoring location. All sites were located and were able to be sampled during the February 2025 event.

GROUNDWATER

All groundwater sites exceeded at least one of the adopted assessment criteria during the February 2025 monitoring event (ANZECC 2000 guidelines for Fresh Water 95%, Irrigation and Livestock). Results were in line with historic trends at the majority of monitoring bores.

ANZECC 2000 Fresh Water 95% guideline had manganese (filtered) exceedances at BH1 and BH4, the ANZECC 2000 Irrigation guidelines had groundwater bore exceedances at all bores for sodium and chloride, and at BH2 and BH3 for total manganese. Lastly the ANZECC 2000 Livestock Guidelines had exceedances in BH2, BH3 and BH4 for TDS.

All sites were able to be located, gauged and sampled via low flow equipment during the event. No issues were reported at any of the bore locations.

LEACHATE

LB1 was able to be located and sampled during the February 2025 Monitoring Event out at Daylesford Landfill. All water quality results are in line with historic data. Field pH was more basic than it has been previously at 9.28 (historic records can be found in Appendix F). No exceedances against guidelines were noted at Leachate site LB1.

1. INTRODUCTION

Ventia Utility Services Pty Ltd (Ventia) was engaged by Hepburn Shire Council to undertake groundwater and leachate monitoring and event reporting at the former Daylesford Landfill and current Waste Transfer Station located at 16 Ajax Road, Daylesford, Victoria (the site). The site is approximately 5.6 hectares and is registered under A13c (waste and resource recovery – small).

2. MONITORING PROGRAM OVERVIEW

2.1. SITE CONTEXT

Daylesford Landfill and surrounding land to the west of the site is listed on the Victorian Landfill Register. There are several sensitive receptors located nearby; Boomerang Holiday Ranch is directly West, while Sailers Creek is located 100 m West, and an area of Aboriginal Cultural Heritage sensitivity is situated 180 m West. As well as these, residential properties are noted to be approximately 70 m to the East, while no domestic or stock watering bores are located within 250 m of the site. Daylesford Landfill operated until 2004 and when licensed the landfill could accept a range of wastes including municipal solid waste and was classed as a Type 2 landfill (putrescible waste). The site is now the location of a transfer station.

The current monitoring program is required to satisfy specific environmental conditions as requested by the Hepburn Shire Council. There is currently no aftercare management plan or third-party management plan (audit) available for Daylesford closed Landfill, Ventia provides biannual monitoring of the site, along with Event reports for Hepburn Shire Council.

2.2. SCOPE OF WORKS

Ventia was engaged to undertake groundwater and leachate monitoring at the Daylesford Landfill comprising:

- Biannual monitoring of the 4 groundwater bores;
- Biannual monitoring of 1 leachate pond;

This report includes information from the February 2025 monitoring event.

A map of the landfill site location, groundwater bores and leachate pond are provided in Figure 1 and Figure 2, below.

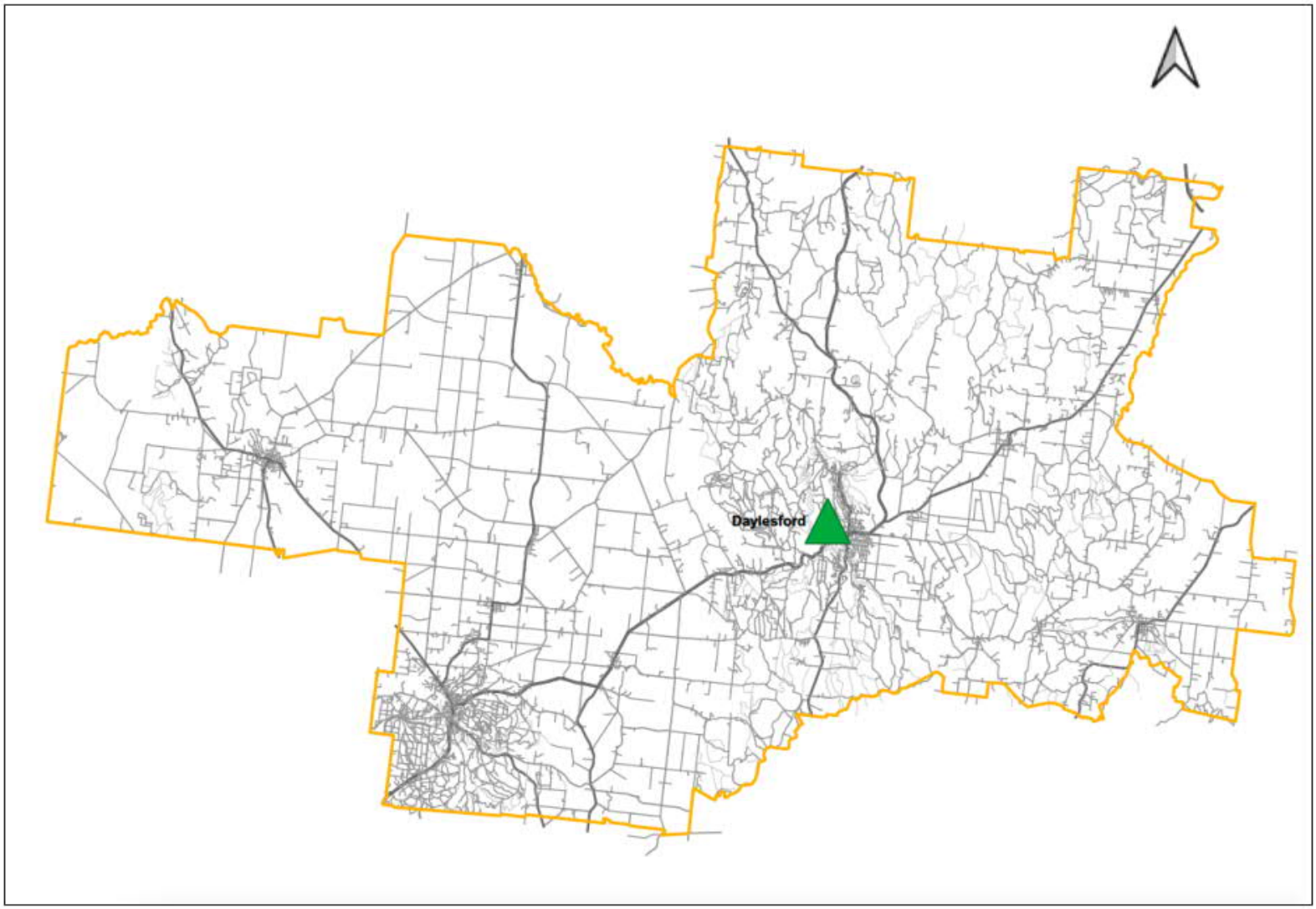

Figure 1 Site location of Daylesford Landfill

Figure 2 Groundwater Bores and Leachate Pond at Daylesford Landfill

3. SAMPLING AND ANALYSIS SCHEDULE

3.1. GROUNDWATER

Four groundwater bores were monitored in the February 2025 monitoring program (Table 1). All bores were sampled via low flow techniques.

Table 1 Groundwater Bore Sites

Bore	Installation Date	Northing (Zone 54)	Eastings (Zone 54)	Screen Depth (mBTOC)	Installation Depth (mBTOC)
BH1	Unknown	777271.622	5863383.638	Unknown	26.90
BH2	Unknown	777247.891	5863473.309	Unknown	20.75
BH3	Unknown	777216.441	5863576.347	Unknown	18.33
BH4	Unknown	777400.804	5863488.237	Unknown	39.14

Notes:
mBTOC – Metres Below Top of Casing
mAHD – Metres Australian Height Datum

3.2. LEACHATE SITES

The leachate pond (LB1) was visited and sampled in the February 2025 monitoring program (Table 2).

Table 2 Leachate Bore Sites

Bore	Installation Date	Easting	Northing	Bore Elevation* (mAHD)	Maximum Leachate Levels (mAHD)
LB1	Unknown	777215.334	5863534.941	556.500	Unknown

Notes:
mBTOC – Metres Below Top of Casing
mAHD – Metres Australian Height Datum

4. SAMPLING METHODOLOGY

4.1. FIELD MEASUREMENTS

Groundwater quality parameters were recorded using a calibrated multi-parameter water quality instrument.

Field record sheets are included as Appendix A.

Groundwater quality measurements recorded include:

- Electrical Conductivity;
- pH;
- Temperature;
- Oxidation Reduction Potential (ORP, or Redox); and
- Dissolved Oxygen.

4.2. LOW FLOW SAMPLING

All groundwater bores were sampled using low flow methods during the February 2025 monitoring event as per the Ventia low flow groundwater sampling procedures which are based on the EPA's Groundwater Sampling Guidelines (Publication 669, April 2000). Sample tubing is left in the bore and replaced every year.

A flow through cell was utilised for field stabilisation measurements during the purging cycle. Measurements were taken at approximate five-minute intervals depending on the flow rate during the purging cycle and recorded on the Ventia Groundwater Sampling Field Sheet provided within the individual monitoring event reports.

Samples were considered stable after three successive measurements were recorded within a defined range as per Table 3.

Table 3 Stabilisation Parameters

Parameter	Range
EC	+/- 3%
pH	+/- 0.05
Redox	+/-10mV
Temperature	+/-10%
Dissolved Oxygen	+/-10%

Signed chain of custodies and laboratory sample receipt records are included within Appendix E.

4.3. GRAB SAMPLING

If the low flow technique is unable to be used bores will be sampled via bailer. This can occur when there are access or bore issues which negates the use of low flow techniques.

All water quality measurements are still able to be collected, however, only one set of parameters per site is collected.

5. REPORTING

5.1. ASSESSMENT CRITERIA (GROUNDWATER AND SURFACE WATER QUALITY OBJECTIVES)

Beneficial uses for the site were assessed against the Environmental Reference Standard (ERS, DELWP 2021, previously SEPP, Waters). Protected beneficial uses applicable to the site along with the screening criteria that have been adopted in relation to each of the identified potential beneficial uses, is supplied in Table 4.

Table 4 Beneficial Uses and Adopted Assessment Criteria

Beneficial Use Classification	Adopted Assessment Criteria
Maintenance of ecosystems	ANZECC (2000) 95% protection for slightly to moderately modified freshwater aquatic ecosystems
Livestock	ANZECC (2000) Livestock
Irrigation	ANZECC (2000) Irrigation
Buildings and structures	Varied: No guideline applied
Primary contact recreation	Varied: No guideline applied

Requirements for site laboratory analysis, as requested by Hepburn Shire, are tabulated below (Table 5).

Table 5 Water Quality Objectives

Analytes	Detection Limit	Groundwater Quality Objectives
pH	0.01 pH units	6.5 to 8.0
Electrical conductivity (EC)	1 µS/cm	-
Total dissolved solids (TDS)	10 mg/L	2,000 mg/L
Calcium (CA)	1 mg/L	1,000 mg/L
Magnesium (Mg)	1 mg/L	2,000 mg/L
Sodium (Na)	1 mg/L	115 mg/L
Potassium (K)	1 mg/L	-
Chloride (Cl)	1 mg/L	25-700 mg/L
Sulphate (SO4)	1 mg/L	250 mg/L
Bicarbonate alkalinity (as CaCO3)	1 mg/L	-
Total organic carbon (TOC)	1 mg/L	-
Chemical oxygen demand (COD)	10 mg/L	-
Ammonia (NH3)	0.01 mg/L	0.9 mg/L (as NH3)
Nitrate (NO3)	0.01 mg/L	0.16 mg/L (as N)
Total Kjeldahl nitrogen (TKN)	0.1 mg/L	25 mg/L
Volatile fatty acids (VFA)	5 mg/L	-
Arsenic (As)	0.005 mg/L	0.01 mg/L
Cadmium (Cd)	0.005 mg/L	0.002 mg/L
Chromium (Cr)	0.001 mg/L	0.001 mg/L
Copper (Cu)	0.001 mg/L	0.0014 mg/L
Lead (Pb)	0.001 mg/L	0.0034 mg/L
Mercury (Hg)	0.0001 mg/L	0.001 mg/L
Nickel (Ni)	0.001 mg/L	0.011 mg/L
Zinc (Zn)	0.005 mg/L	0.008 mg/L

6. WEATHER CONDITIONS

Temperature and rainfall data was taken from the Bureau of Meteorology (BOM) Weather Station Castlemaine Prison (station 088110), located at Castlemaine (approximately 30 km north of the Site), while barometric pressure data was obtained from Bendigo Airport (station 081123) which is approximately 68 km north of the Site.

Figure 3 and Figure 4 depict the climate and barometric pressure readings leading up to and during the monitoring event, which took place on the 24th and the 28th of February 2025.

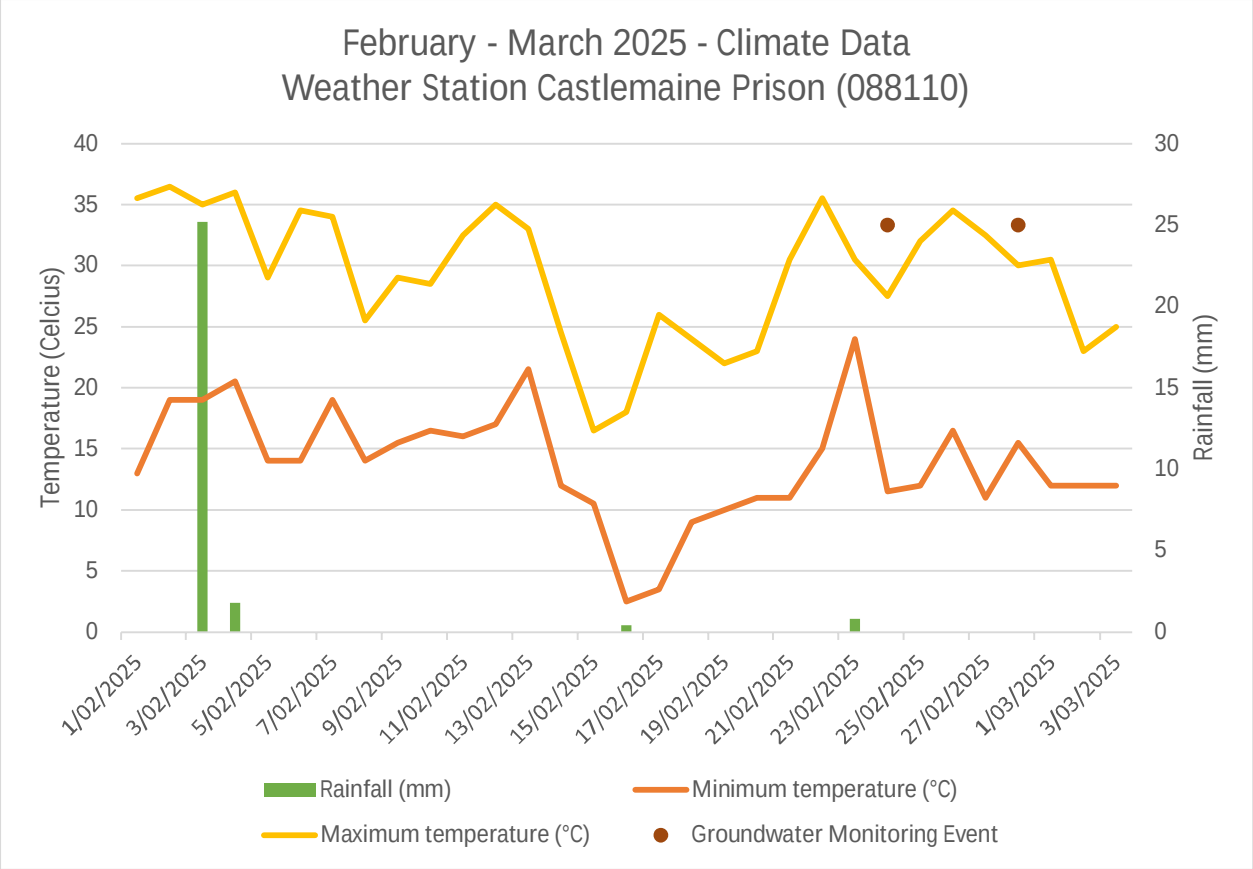

Figure 3 February 2025 temperature and rainfall readings from Castlemaine Prison and corresponding Ventia site visits

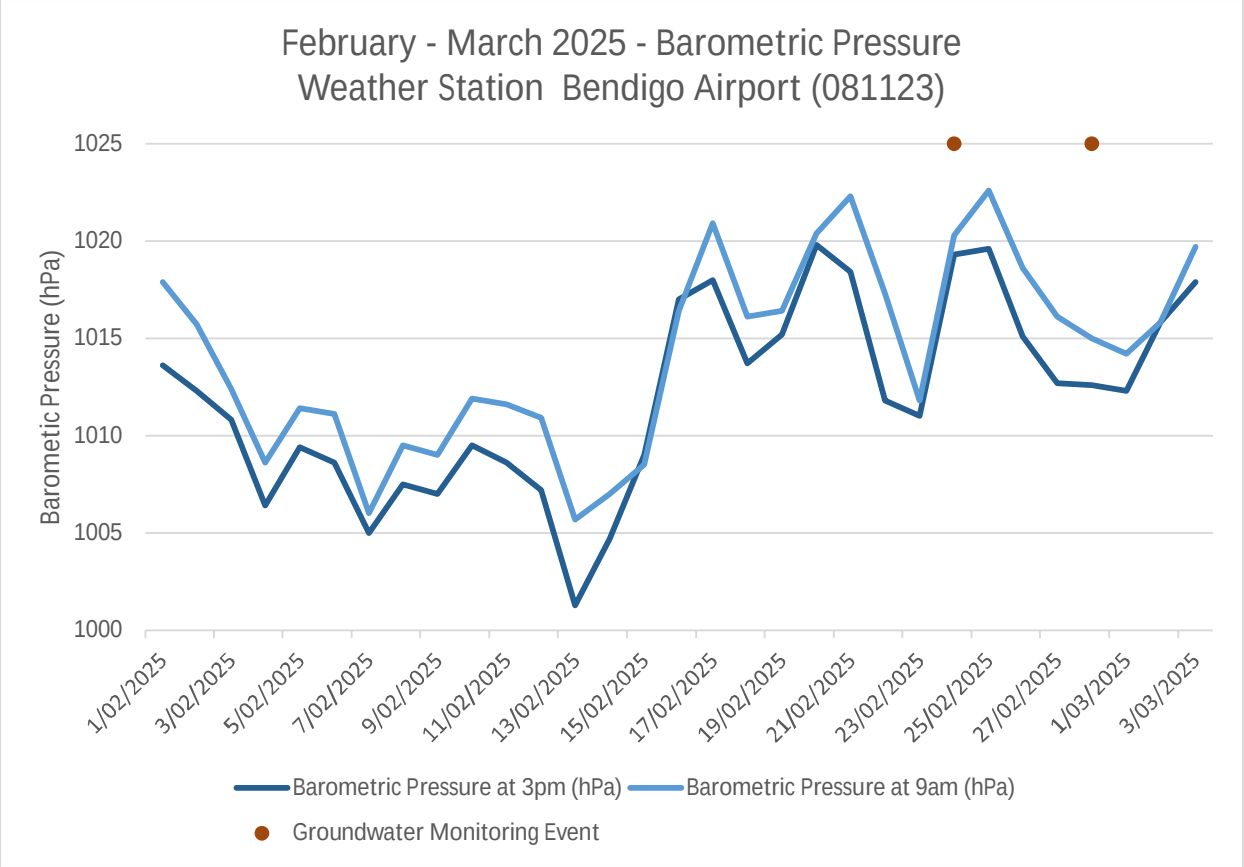

Figure 4 February 2025 twice daily barometric pressure readings from Bendigo Airport and corresponding Ventia site visits

No rainfall was recorded during the February 2025 groundwater monitoring event; however, 0.8 mm fell on the day prior (23rd February 2025), with a total of 28.2 mm falling throughout the month.

The mean temperature for February (based on historic and current data) is 28.2 °C, minimum and maximum temperature over this period were 11.5 °C and 30 °C, respectively.

The barometric pressure was seen to be increasing on the first day of sampling and falling on the second day of sampling.

7. WATER MONITORING RESULTS

7.1. GROUNDWATER MONITORING RESULTS

7.1.1 Groundwater Field Measurements

A summary of the groundwater field measurements at Daylesford Landfill during the February 2025 monitoring event is provided below (Table 6).

Table 6 Groundwater and Leachate Gauging Data and Field Measurements

ID	Date	WD (mBTOC)	SWL (mBTOC)	EC µS/cm	pH	Temp °C	ORP mV	DO mg/L
BH1	28/02/2025	26.80	18.27	1908	5.37	15.50	-16.9	0.32
BH2	24/02/2025	19.80	8.42	2896	6.12	14.60	-4.3	0.13
BH3	24/02/2025	18.20	4.83	3385	5.94	13.50	-7.5	0.27
BH4	28/02/2025	37.10	26.75	4575	5.34	15.60	-20.9	0.20

Notes:

WD -- Well Depth
SWL – Standing Water Level
mBTOC – Metres Below Top of Casing
mAHD – Metres Australian Height Datum

7.1.2 Groundwater Quality

Table 7 provides a summary of groundwater exceedances against the adopted ANZECC 2000 Freshwater 95% Species Protection, ANZECC 2000 Irrigation and ANZECC 2000 Livestock guidelines. A complete results table is provided in Appendix C, while copies of the laboratory analysis certificates are provided in Appendix E.

Table 7 Groundwater Exceedances

			Solids	Major Ions		Metals	
			TDS	Chloride	Sodium	Manganese (Total)	Manganese (Filtered
			mg/L	mg/L	mg/L	mg/L	mg/L
EQL			10	1	0.5	0.005	0.005
ANZECC 2000 FW 95%						1.9	1.9
ANZECC 2000 Irrigation				175	115	0.2	0.2
ANZECC 2000 Livestock			2,000				
Field ID	Date	Lab Report Number					
BH1	28 Feb 2025	1193731	1,200	410	150	--	4.7
BH2	24 Feb 2025	1191648	2,100	500	260	1.2	--
BH3	24 Feb 2025	1191648	2,300	640	280	0.94	--
BH4	28 Feb 2025	1193731	3,300	950	400	--	5.4

Environmental Standards

Australian and New Zealand Environment and Conservation Council, October 2000, ANZECC 2000 FW 95%

Australian and New Zealand Environment and Conservation Council, October 2000, ANZECC 2000 Irrigation

Australian and New Zealand Environment and Conservation Council, October 2000, ANZECC 2000 Livestock

All groundwater sites exceeded at least one of the adopted assessment criteria including ANZECC 2000 Fresh Water 95% guideline, ANZECC 2000 Irrigation, ANZECC 2000 Livestock and groundwater quality objectives during the February 2025 monitoring event.

Manganese (filtered) exceeded the ANZECC 2000 Fresh Water 95% guideline at BH1 and BH4, with BH2 and BH3 breaching ANZECC 2000 Irrigation guideline for total manganese. Chloride and sodium exceeded the ANZECC 2000 Irrigation guideline at all sites. There were three TDS exceedances detected at BH2 (2,100 mg/L), BH3 (2,300 mg/L), and BH4 (3,300 mg/L), which breached the ANZECC 2000 Livestock guidelines. All primary laboratory results from this program are located in Appendix C.

Due to an error when the NATA accredited laboratory was booking samples in, zinc analysis was not included for any of the sampled sites. The quote has now been updated and notes have been made for Ventia to thoroughly check sample receipt documents sent through in future events so the issue does not reoccur.

A summary of guideline exceedances of groundwater samples collected from the February 2025 monitoring period are provided below. Table 8 indicates potential impacts against the adopted assessment criteria.

Table 8 Summary of Potential Groundwater Impacts against the Adopted Assessment Criteria

Monitoring Location	ANZECC 2000 FW 95% Species Protection	ANZECC 2000 Irrigation	ANZECC 2000 Livestock
BH1	× - Manganese (filtered)	× - Chloride and sodium	✓
BH2	✓	× - Chloride, sodium and manganese (total)	× - TDS
BH3	✓	× - Chloride and sodium and manganese (total)	× - TDS
BH4	× - Manganese (filtered)	× - Chloride and sodium	× - TDS

Notes: × indicates potential impact to the protected Beneficial Use
✓ indicates no identified impact to protected Beneficial Use

7.2. LEACHATE MONITORING RESULTS

7.2.1 Leachate Field Measurements

The Leachate bore LB1 was visited and sampled during the February 2025 monitoring event. Leachate field monitoring results have been provided in Table 9.

Table 9 Leachate Field Measurements

ID	Date	SWL (mBTOC)	SWL (mAHD)	EC (µS/cm)	pH	Temperature (°C)	ORP (mV)	DO (mg/L)
LP1	24/02/2025	-	0.20	718	9.28	20.0	-14.7	8.25

7.2.2 Leachate Quality

No exceedances against the adopted ANZECC 2000 Freshwater 95% Species Protection, ANZECC 2000 Irrigation and ANZECC 2000 Livestock guidelines were detected from the Leachate Pond sample. A complete results table is provided in Appendix B, while copies of the laboratory analysis certificates are provided in Appendix E.

8. QUALITY CONTROL / QUALITY ASSURANCE

8.1. PROGRAM

A summary of the QA/QC procedures adopted for the monitoring program are provided in Table 10.

Table 10 Quality Assurance and Quality Control program

Item	Description
Laboratory accreditation	Groundwater samples were submitted to laboratories that are accredited by NATA for the analytes tested. All primary samples were submitted to Eurofins and secondary samples to ALS.
Sample collection and transport	All samples were collected by suitably qualified Ventia personnel trained in the relevant procedures. Samples were sealed into laboratory prepared containers then transferred to the laboratory using the correct sample preservation and chain of custody protocols.
Field and inter-lab duplicates	Blind and split duplicate samples were collected at greater than the nominated rate of 1 in 20 primary samples. One duplicate set was taken for the February 2025 monitoring event.
Relative percentage difference (RPD)	The relative percentage difference (RPD) is assessed to evaluate the sampling methodology and the analytical techniques used. The RPD is calculated using the following formula: $$RPD = \frac{(Result\ 1 - Result\ 2)}{(Result\ 1 + Result\ 2)/2}\ X\ 100\%$$ RPD's have been assessed under the following criteria: 1. RPDs have only been considered where a concentration is greater than 1 times the EQL 2. Acceptable RPDs for each EQL multiplier range are: 81 (1-10 x EQL); 50 (10-30 x EQL); 20 (> 30 x EQL) 3. The significance of RPD of results should be evaluated on the basis of sampling technique, sample variability, absolute concentration relative to criteria and laboratory performance 4. This variation can be expected to be higher for organic analysis than for inorganics, and for low concentration of analytes.
Sample blanks	Sample blanks were submitted to verify that no cross contamination had occurred during sampling or in the transfer of samples to the laboratory (Table I2): • Equipment rinsate samples were collected at the nominated rate of 1 in 20 primary samples or one per sample type, which ever was greater. The frequency of sample blanks was considered suitable to satisfy the data quality objectives of the program. One rinsate was taken for the February 2025 monitoring event.

Item	Description
Laboratory quality control procedures	All analytical laboratories used by Ventia are required to adhere to NATA endorsed methodologies and conduct regular control checks on their analyses. Ventia requires these laboratories to regularly provide results of control method blanks, repeat blind replicates and recoveries. The following summarises pertinent acceptance limits for internal laboratory analysis: • Surrogates: 75 - 125% recovery • Matrix spikes: 70% - 130% • Laboratory control samples: 75% - 125% • Laboratory Duplicate Samples: Acceptable RPDs for each EQL multiplier range are: Not Applicable (1-10 x EQL); 50 (10-30 x EQL)*; 20 (> 30 x EQL)*. • Method Blanks: 0 to <PQL *Unless sample heterogeneity is established.

8.2. RESULTS

The QA/QC program consisted of the collection of duplicate samples and a rinsate sample. A summary of the QA/QC results is provided in Appendix D. All samples were collected by suitably qualified Ventia personnel and the sampling methods, including sample preservation, transport and decontamination, were consistent with Ventia procedures.

Across the sampling program, 5 primary samples were collected during the February 2025 monitoring program. One blind and one split duplicate sample was collected for comparison, in accordance with the data quality objective. This meets the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) recommended minimum rate of one per 20 samples.

A review of exceedances indicates that where RPDs were above the adopted criteria, differences can generally be attributed to two different categories. Table 11 (below) displays all high RPD's, results that are coloured yellow are those that are less than 10 times the Estimated Quantitation Limit (EQL). Results coloured green are where the primary samples were higher than the secondary value which provides a more conservative observation of the analyte. Results highlighted blue are discussed below.

Iron had a high RPD of 72% between the primary and the split sample taken at BH3. It is possible this is due to the heterogeneity of the samples. Another factor that may have caused a higher RPD is that the primary sample of BH3 was analysed for total metals, while the split sample was analysed for filtered metals. The secondary laboratory has been contacted to note that total metals is required and when sampling is undertaken during the next monitoring event Ventia will ensure they confirm analysis is correct. There are no nominated exceedance values for the ANZECC guidelines, but for a more conservative observation the secondary sample results should be used.

The Relative Percentage Difference (RPD) for field duplicates and inter-lab duplicates were calculated for all results and are summarised in Appendix D.

Table 11 RPD Exceedances

Site	Secondary Sample	Date	Primary Lab Report	Secondary Lab Report	Analyte	Units	EQL	Primary Result	Secondary Result	RPD
BH3	Split	24/08/2025	1191648	EM2503062	Volatile Fatty Acids (as Acetic Acid)	ug/L	5,000	<5000	45000	160
					Kjeldahl Nitrogen Total	mg/L	0.1	0.3	0.7	80
					Iron	mg/L	0.05	12	25.6	72
BH2	Blind	24/8/2025	1191648	1191648	Ammonia (as N)	mg/L	0.01	0.10	0.06	50

All analytical data for the rinsate sample came back below <LOR, except for pH, which had a reading of 5.8, this is not due to any lack of care taken during the cleaning process in the field. Deionised water (as supplied by the NATA accredited laboratory) tends to have a pH of between 5.5 and 6.9, dependant on how long it has been exposed to air.

Based on the QA/QC program, the analytical data is sufficient for the purposes of this monitoring program.

9. CONCLUSIONS

9.1. GROUNDWATER

All groundwater sites exceeded at least one of the adopted assessment criteria during each monitoring event (ANZECC 2000 guidelines for Fresh Water 95%, Irrigation and Livestock). Results were in line with historic trends at the majority of monitoring bores.

BH1 and BH4 had exceedances against ANZECC 2000 FW 95% guidelines. BH2, BH3 and BH4 exceeded ANZECC 2000 Livestock guidelines. All sites (BH1, BH2, BH3 and BH4) were found to exceed against the ANZECC 2000 Irrigation guidelines.

All four of the groundwater locations were accessible and able to be sampled by low flow equipment. There were no issues noted for any of these sampling locations.

10.3. LEACHATE

Leachate bore LB1 was able to be accessed and sampled in February 2025. No issues were noted at the site and there were no exceedances against any of the adopted guidelines.

10.4. DATA UNCERTAINTY AND STATEMENT OF LIMITATIONS

Ventia has used a degree of skill and care ordinarily exercised by reputable members of our profession practising in the same or similar locality. The conclusions presented in this report are relevant to the condition of the site and the state of legislation currently enacted as at the date of this report. Ventia does not make any representation or warranty that the conclusions in this report will be applicable in the future as there may be changes in the condition of the site, applicable legislation or other factors that would affect the conclusions contained in this report.

11. DECLARATION

This declaration acknowledges that Ventia has been requested by Hepburn Shire Council to undertake an Environmental Monitoring Program in accordance with sampling and analysis as delegated by Hepburn Shire.

Ventia sampling procedures were adopted for all environmental monitoring undertaken. All groundwater and surface water monitoring were conducted in accordance with EPA Victoria's Groundwater Sampling Guidelines (Publication 669; April 2000) and Sampling and Analysis of Waters, Wastewaters, Soils and Wastes (IWRG701; EPA, 2009).

This report provides a summary of the analysis conducted under the monitoring program, an assessment of the likely offsite water quality and air quality impacts associated with the landfill as well as recommendations for improvements to the monitoring program.

Ventia is of the opinion that this report prepared on behalf of Hepburn Shire Council and titled 'February 2025 Monitoring Event Report - Daylesford Landfill' contains adequate information of suitable quality to enable the Hepburn Shire Council to fulfill its monitoring requirements.

12. REFERENCES

DELWP 2021. Environment Reference Standard 2021. Department of Environment, Land, Water and Planning, State Government of Victoria.

EPA 2000. A Guide to the Sampling and Analysis of Waters, Wastewaters, Soils and Wastes. Publication 441.7, Environmental Protection Authority, State Government of Victoria.

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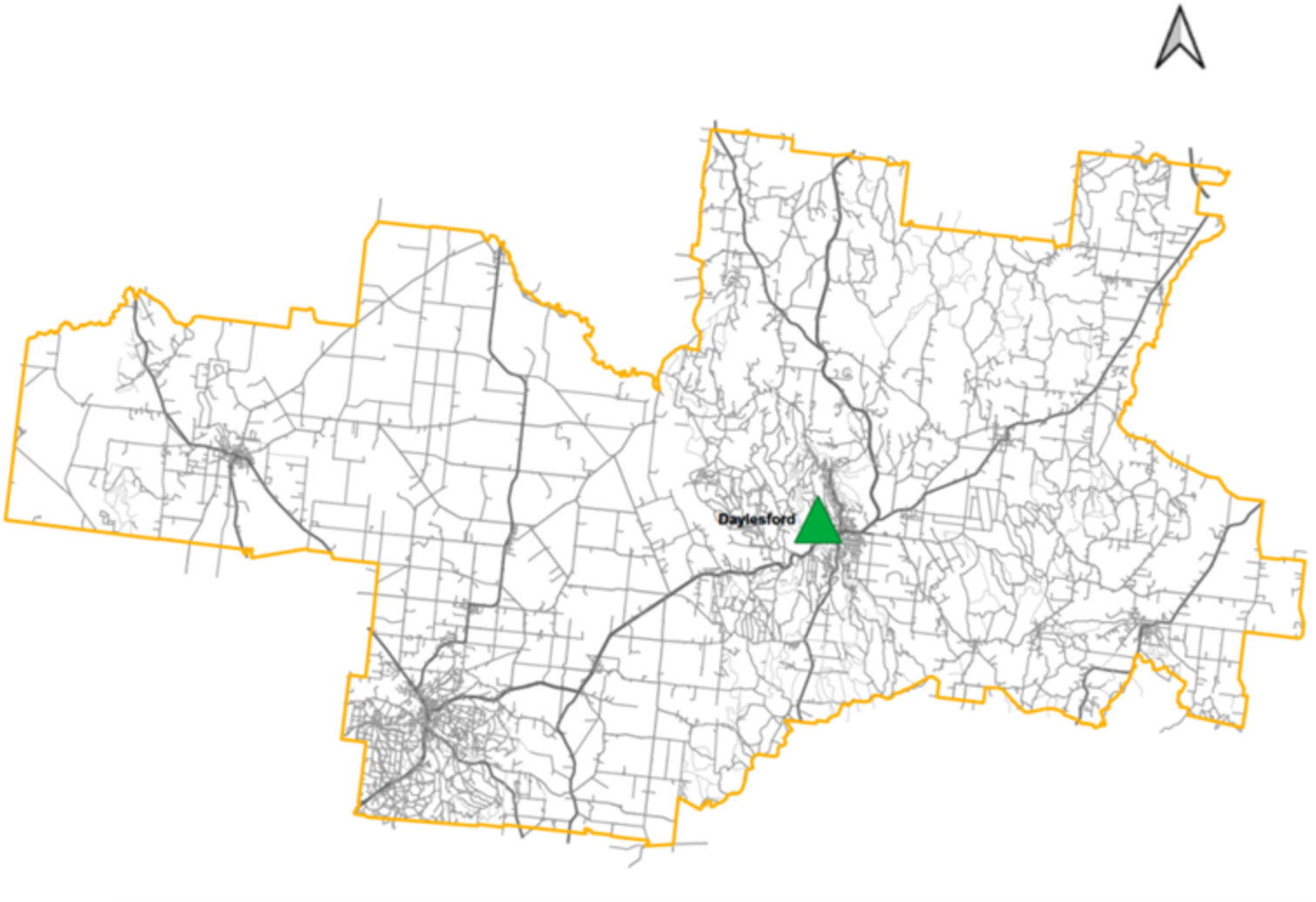
Philip Vawdrey Engineering Pty Ltd 2010. Geotechnical Investigation Proposed Extension to the Waste Sorting Shed, Philip Vawdrey Engineering Pty Ltd, October 2010

SKM 1998. Daylesford Municipal Landfill Site, Hydrogeological Assessment, July 1998.

APPENDICES

APPENDIX A – MAP


Daylesford


Hepburn Regional Park - Part
BH3
Leachate Pond
BH4
BH2
Daylesford Transfer Station And Landfill
BH1
Legend
Daylesford Landfill Boundary
Groundwater Bore
Leachate Pond
Google Earth
Image © 2024 Airbus
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100 m

APPENDIX B – FIELD RECORD SHEETS

SAMPLING RESULTS SUBMISSION SHEET (SAMPLING UNDERTAKEN BY VENTIA)

Client: Hepburn Shire Council
Site: Daylesford Landfill
Program: Groundwater/Surface Water Sampling

Sampling Period: February 2025
Sampler: PR
Phone: 0408 405 305

Bore/Sample Point	Date	Time (EST)	Depth (mbmp)	SWL m (mbtoc)	Electrical Conductivity (us/cm @ 25°C)	pH	Temp. (°C)	Redox (mV)	DO (mg/L)	Comments
BH1	28/02/2025	9:46	26.80	18.27	1908	5.37	15.5	-16.9	0.32	Clear, no odour.
BH2	24/02/2025	11:55	19.80	8.42	2896	6.12	14.6	-4.3	0.13	Clear, no odour.
BH3	24/02/2025	10:02	18.20	4.83	3385	5.94	13.5	-7.5	0.27	Clear, no odour.
BH4	28/02/2025	10:53	37.10	26.75	4575	5.34	15.6	-20.9	0.20	Clear, slight odour.
LP1	24.02.2025	11:00	--	0.20	718	9.28	20.0	-14.7	8.25	location cordinates recorded and plotted on google maps.

NOTES:
1 Groundwater samples taken using the low-flow method (as per EPA Publication 669) unless otherwise noted
2 All depths measured from the top of the PVC casing

Notes: All bore measurements are referenced to the marked measurement point. All Coordinates in GDA94.

TS Groundwater sampling field sheet - Env Monitoring

Bore ID No	BH1	Project Name	Hepburn Landfills	Sampling Staff	PR
Project Area:		Client		WQ. Meter Model	YSI PRO
Date	28.02.2025	Project No		WQ. Meter Serial #	12J101715

Expected Bore Details

Internal Diameter (mm)		Easting		Total Depth (m)		Screen Depth From (m)	
Drop Tube already in bore? (Y/N)	N	Northing		Water Level (m)		Screen Depth To (m)	
Drop Tube Length (m)		Zone		Set Pump inlet at (m)		Set Pump at (m)	

Additional Information

Bore Field Measurements

Time of SWL	9:12	Total Depth (m)	26.80	Mid-screen accessible?	Clear	Depth pump set at (m)	25.80
Static Water Level (m)	18.27	Bore Diam (mm)	50	Open Screen Length(m)	0.00	Depth of pump inlet (m)	25.80

Well Purging Details

Purge Method	LF	Pump Type	MP
Time Pump in	9:15	Pump in' WL	18.17
Time Started	9:25	WL m (start)	18.17
Time Stopped	9:46	WL m (end)	18.45
Volume Removed (l)	2.5		
Discharge Rate (l/m)	0.12		

Sampling Details

Sampling Method	LF		
Time Started	9:46	WL m (start)	18.44
Time Stopped	9:55	WL m (end)	18.36
Duplicate sample ID?			
Triplicate sample ID?			
Rinsate sample ID?			

Sample Bottles Required

Bottle Type	Quantity	Bottle Type	Quantity

Pump Removal

Time of removal	9:57	WL m(post-removal)	18.36	Bore Depth at end (m)	

Pump Settings

Fill / Discharge used	10/5	CPM		Air/Gas Pressure (kPa)	40

Comments: Good sample taken

WQ stable

Field Parameters are considered stable when within the EPA limits for 3 consecutive measurements

50 = vol required for 3V method (L)			+/- 3%	+/- 0.05 pH	+/- 10%	+/- 10mV	+/- 10%	
Time	Cumulative Volume Removed (l)	Water Level (m below MP)	Stability of Field Params	Specific Conductance EC (uS/cm) @25°C	pH	Temp. (°C)	Redox ORP (mV)	DO (mg/L)	Comments (colour, turbidity, odours, other)
9:25		18.17							
9:28		18.28							
9:31		18.28							
9:34	0.3	18.35	#DIV/0!	1929	5.36	15.60	-8.5	1.10	Clear, no odour
9:37	1	18.38	#DIV/0!	1915	5.36	15.50	-13.3	0.53	Clear, no odour
9:40	1.5	18.42	Keep purging	1909	5.37	15.50	-16.6	0.32	Clear, no odour
9:43	2	18.44	Keep purging	1908	5.37	15.50	-17.5	0.32	Clear, no odour
9:46	2.5	18.45	OK to sample	1908	5.37	15.50	-16.9	0.32	Clear, no odour

Notes: All bore measurements are referenced to the marked measurement point. All Coordinates in GDA94.

TS Groundwater sampling field sheet - Env Monitoring

Bore ID No	BH2	Project Name	Hepburn Landfills	Sampling Staff	PR
Project Area:		Client		WQ. Meter Model	YSI PRO
Date	24.2.2025	Project No		WQ. Meter Serial #	12J101715

Expected Bore Details

Internal Diameter (mm)		Easting		Total Depth (m)	19.80	Screen Depth From (m)	
Drop Tube already in bore? (Y/N)	N	Northing		Water Level (m)	8.42	Screen Depth To (m)	
Drop Tube Length (m)		Zone		Set Pump inlet at (m)		Set Pump at (m)	

Additional Information

Bore Field Measurements

Time of SWL	11:17	Total Depth (m)	19.80	Mid-screen accessible?	Clear	Depth pump set at (m)	17.50
Static Water Level (m)	8.42	Bore Diam (mm)	50	Open Screen Length(m)	0.00	Depth of pump inlet (m)	17.50

Well Purging Details

Purge Method	LF	Pump Type	mp
Time Pump in	11:30	Pump in' WL	8.42
Time Started	11:33	WL m (start)	8.30
Time Stopped	11:55	WL m (end)	8.55
Volume Removed (l)	1.9		
Discharge Rate (l/m)	0.09		

Sampling Details

Sampling Method	lf		
Time Started	11:55	WL m (start)	8.55
Time Stopped	12:15	WL m (end)	8.59
Duplicate sample ID?			
Triplicate sample ID?			
Rinsate sample ID?			

Sample Bottles Required

Bottle Type	Quantity	Bottle Type	Quantity

Pump Removal

Time of removal		WL m(post-removal)		Bore Depth at end (m)	

Pump Settings

Fill / Discharge used	11/9	CPM		Air/Gas Pressure (kPa)	35psi

Comments: Clear, no odour; Good sample taken; Blind duplicate taken

Field Parameters are considered stable when within the EPA limits for 3 consecutive measurements

	67 = vol required for 3V method (L)			+/- 3%	+/- 0.05 pH	+/- 10%	+/- 10mV	+/- 10%	
Time	Cumulative Volume Removed (l)	Water Level (m below MP)	Stability of Field Params	Specific Conductance EC (uS/cm) @25°C	pH	Temp. (°C)	Redox ORP (mV)	DO (mg/L)	Comments (colour, turbidity, odours, other)
11:39									
11:42									
11:45									
11:45	0.2	8.40	#DIV/0!	2918	6.10	14.70	-3.9	0.29	Clear no odour
11:48	0.5	8.42	#DIV/0!	2917	6.10	14.70	-3.8	0.27	Clear no odour
11:48	0.8	8.48	Keep purging	2918	6.10	14.70	-3.7	0.23	Clear no odour
11:52	1.3	8.52	Keep purging	2898	6.12	14.60	-4.1	0.13	Clear no odour
11:55	1.9	8.55	Keep purging	2896	6.12	14.60	-4.3	0.13	Clear no odour

Notes: All bore measurements are referenced to the marked measurement point. All Coordinates in GDA94.

TS Groundwater sampling field sheet - Env Monitoring

Bore ID No	BH3	Project Name	Hepburn land fills	Sampling Staff	PR
Project Area:		Client		WQ. Meter Model	YSI PRO
Date	24.02.2025	Project No		WQ. Meter Serial #	12J101715

Expected Bore Details

Internal Diameter (mm)	50	Easting		Total Depth (m)	18.20	Screen Depth From (m)	
Drop Tube already in bore? (Y/N)	NO	Northing		Water Level (m)	4.85	Screen Depth To (m)	
Drop Tube Length (m)		Zone		Set Pump inlet at (m)		Set Pump at (m)	17.50
Additional Information							

Bore Field Measurements

Time of SWL	20:24	Total Depth (m)	18.20	Mid-screen accessible?	Clear	Depth pump set at (m)	17.50
Static Water Level (m)	4.83	Bore Diam (mm)	50	Open Screen Length(m)	0.00	Depth of pump inlet (m)	17.50

Well Purging Details

Purge Method	MP	Pump Type	
Time Pump in	9:30	Pump in' WL	4.83
Time Started	9:40	WL m (start)	4.83
Time Stopped	10:02	WL m (end)	4.85
Volume Removed (l)	1.5		
Discharge Rate (l/m)	0.07		

Sampling Details

Sampling Method	MP		
Time Started	10:02	WL m (start)	4.85
Time Stopped	10:15	WL m (end)	4.85
Duplicate sample ID?			
Triplicate sample ID?			
Rinsate sample ID?			

Sample Bottles Required

Bottle Type	Quantity	Bottle Type	Quantity

Pump Removal

Time of removal	10:20	WL m(post-removal)	4.85	Bore Depth at end (m)	

Pump Settings

Fill / Discharge used	11/9	CPM		Air/Gas Pressure (kPa)	35PSI

Comments

Clear, no odour

Good sample taken

QC Taken - field split and rinsate

Field Parameters are considered stable when within the EPA limits for 3 consecutive measurements

	79	= vol required for 3V method (L)		+/- 3%	+/- 0.05 pH	+/- 10%	+/- 10mV	+/- 10%	
Time	Cumulative Volume Removed (l)	Water Level (m below MP)	Stability of Field Params	Specific Conductance EC (uS/cm) @25°C	pH	Temp. (°C)	Redox ORP (mV)	DO (mg/L)	Comments (colour, turbidity, odours, other)
9:43		4.83							
9:46		4.85							
9:49		4.85							
9:52	0.1	4.87	#DIV/0!	3270	5.93	13.80	-11.7	2.35	Clear, no odour
9:55	0.6	4.87	#DIV/0!	3342	5.92	13.50	-9.3	0.82	Clear, no odour
9:58	1	4.85	Keep purging	3352	5.93	13.50	-8.6	0.36	Clear, no odour
10:02	1.5	4.85	Keep purging	3385	5.94	13.50	-7.5	0.27	Clear, no odour

Notes: All bore measurements are referenced to the marked measurement point. All Coordinates in GDA94.

TS Groundwater sampling field sheet - Env Monitoring

Bore ID No	BH4	Project Name	Hepburn Landfills	Sampling Staff	PR
Project Area:		Client		WQ. Meter Model	YSI PRO
Date	28.02.2025	Project No		WQ. Meter Serial #	12J101715

Expected Bore Details

Internal Diameter (mm)		Easting		Total Depth (m)		Screen Depth From (m)	
Drop Tube already in bore? (Y/N)	n	Northing		Water Level (m)		Screen Depth To (m)	
Drop Tube Length (m)		Zone		Set Pump inlet at (m)		Set Pump at (m)	

Additional Information

Bore Field Measurements

Time of SWL	10:20	Total Depth (m)	37.10	Mid-screen accessible?	Clear	Depth pump set at (m)	
Static Water Level (m)	26.75	Bore Diam (mm)	50	Open Screen Length(m)	0.00	Depth of pump inlet (m)	

Well Purging Details

Purge Method	LF	Pump Type	MP
Time Pump in	10:33	Pump in' WL	26.66
Time Started	10:35	WL m (start)	26.66
Time Stopped	10:53	WL m (end)	26.85
Volume Removed (l)	2.9		
Discharge Rate (l/m)	0.16		

Sampling Details

Sampling Method	LF		
Time Started	10:53	WL m (start)	26.85
Time Stopped	11:02	WL m (end)	26.84
Duplicate sample ID?			
Triplicate sample ID?			
Rinsate sample ID?			

Sample Bottles Required

Bottle Type	Quantity	Bottle Type	Quantity

Pump Removal

Time of removal	11:05	WL m(post-removal)	26.83	Bore Depth at end (m)	

Pump Settings

Fill / Discharge used	10/5	CPM		Air/Gas Pressure (kPa)	60

Comments: All times EST; Heavily ant infested; Grey, slight odour

Field Parameters are considered stable when within the EPA limits for 3 consecutive measurements

	61 = vol required for 3V method (L)			+/- 3%	+/- 0.05 pH	+/- 10%	+/- 10mV	+/- 10%	
Time	Cumulative Volume Removed (l)	Water Level (m below MP)	Stability of Field Params	Specific Conductance EC (uS/cm) @25°C	pH	Temp. (°C)	Redox ORP (mV)	DO (mg/L)	Comments (colour, turbidity, odours, other)
10;35		26.68							
10:38	0.2	26.76	Keep purging	4312	5.42	17.00	-3.7	3.01	Grey, slight odour
10:41	0.7	26.82	#DIV/0!	4568	5.36	16.00	-14.9	1.06	Grey, slight odour
10:44	1.2	26.85	Keep purging	4580	5.33	15.70	-14.8	0.30	Grey, slight odour
10:47	1.9	26.86	Keep purging	4576	5.34	15.70	-17.6	0.22	Grey, slight odour
10:50	2.4	26.85	Keep purging	4575	5.34	15.60	-19.3	0.20	Grey, slight odour
10:53	2.9	26.85	OK to sample	4575	5.34	15.60	-20.9	0.20	Grey, slight odour

INTERMEDIATE VERIFICATION AND CALIBRATION

Serial no.: 12J10716	Centre: Geelong
Model no. YSI PRO Plus	
Parameter: Multi-probe	
(EC, DO, TU, pH, Temperature, Redox)	

Date of verification /calibration	Results						Comments	Staff initials
	Expected	Observed	Adjusted	Batch no.	Slope mV	Asy mV		
24/2/2025	1413	1496	Yes	428738			EC	PD
24/2/2025	4.01	4.03	Yes	422643			pH4	PD
24/2/2025	7	7.00	No	426181			pH7	PD
24/2/2025	10	9.88	Yes	428124			pH10	PD
24/2/2025	228	205.7	Yes	426086 426087			Redox	PD
24/2/2025	100	96.9	NA	DI			DO	PD
25/2/2025	1413	1400	Yes	428738			EC	PD
25/2/2025	4.01	4.15	Yes	422643			pH4	PD
25/2/2025	7	7.15	Yes	426181			pH7	PD
25/2/2025	228	236.7	Yes	426086 426087			Redox	PD
25/2/2025	100	100.7	N/A	DI			DO	PD
26/2/2025	1413	1395	Yes	428738			EC	PD
26/2/2025	4.01	3.92	Yes	422643			pH4	PD
26/2/2025	7	6.99	Yes	426181			pH7	PD
26/2/2025	228	242.	Yes	426086 426087			Redox	PD
26/2/2025	100	96.9	N	~~428738~~ DI			DO	PD
/ /				~~422643~~				
/ /				~~426181~~				
/ /				~~426086 426087~~				
/ /				~~DI~~				
/ /								
/ /								
/ /								

***If standards are not used to calibrate instrument – explanation required under comments**

Water quality measurements where Q = 10 shall meet the following calibration limits

EC	pH	Turbidity	DO	Temperature
Standard +/- 5%	Standard +/- 0.1 to 0.2	Standard +/- 5%	Verify/Calibrate to solution	Verify/ Calibrate as per procedure
146.9 139.6 - 154.3	**4** 3.9 – 4.1	**20** 19 - 21		
1413 1342 - 1484	**7** 6.9 – 7.1	**100** 95 – 105		
12880 12236 - 13524	**10** 9.8 – 10.2	**800** 760 - 840		

WQ Instruments that require continual calibration from initial values outside the above tolerance ranges using the specified solutions will need to be returned to the manufacturer for assessment or repair.

ventia

INSTRUMENTATION - INTERMEDIATE VERIFICATION AND CALIBRATION

Serial no.: 12J10716	Centre: Geelong
Model no.: YSI PRO PLUS	
Parameter:	
(EC, DO, TU, pH, Temperature, Redox)	

Date of verification /calibration	Results						Comments	Staff initials
	Expected	Observed	Adjusted	Batch no.	Slope mV	Asy mV		
27/2/25	1413	1440	Yes	428738			EC	PD
27/2/25	4.01	4.03	Y	422643			pH4	PD
27/2/25	7.00	6.89	Y	426181			pH7	PD
27/2/25	228	237.1	Y	426086 426087			Redox	PD
27/2/25	100	98.3	N	DI			DO	PD
28/2/25	1413	1398	Yes	428738			EC	PD
28/2/25	4.01	4.00	Yes added	422643			pH4	PD
28/2/25	7.00	6.86	Yes	426181			pH7	PD
28/2/25	228	242	Yes	426086 426087			Redox	PD
28/2/25	100	95.8	NO	DI			DO	PD
/ /								
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*If standards are not used to calibrate instrument - explanation required under comments

Water quality measurements where Q = 10 shall meet the following calibration limits

EC	pH	Turbidity	DO	Temperature
Standard +/- 5%	Standard +/- 0.1	Standard +/- 3%	<+/-2% FS (0-20mg/l)	+/-0.2°C (When a temperature stabilised environment can be created)
+/- 10 µS/cm < 1,000	4 3.9 - 4.1	0 - 10 = 0.10 NTU		
+/- 100 µS/cm > 1,000	7 6.9 - 7.1	0 - 100 = 1.00 NTU	<+/- 0.4 mg/l (0-20mg/l)	
	10 9.9 - 10.1	0 - 1000 = 10.00 NTU		

WQ Instruments that require continual calibration from initial values outside the above tolerance ranges using the specified solutions will need to be returned to the manufacturer for assessment or repair.

APPENDIX C – LABORATORY RESULTS

Daylesford Primary Results - February 2025

	Unit	EQL	ANZECC 2000 FW 95%	ANZECC 2000 Irrigation	ANZECC 2000 Livestock					
Field ID						BH1	BH2	BH3	BH4	LP1
Location Code						BH1	BH2	BH3	BH4	LP1
Date						28 Feb 2025	24 Feb 2025	24 Feb 2025	28 Feb 2025	24 Feb 2025
Lab Report Number						1193731	1191648	1191648	1193731	1191648
EC										
Electrical conductivity *(lab)	uS/cm	1				1,700	2,800	3,200	4,100	710
NA										
Acetic Acid	µg/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Heptanoic Acid	µg/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Isobutyric Acid	µg/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Isocaproic Acid	µg/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Isovaleric Acid	µg/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Valeric Acid	µg/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Volatile Fatty Acids (as Acetic Acid)	ug/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
pH										
pH (Lab)	-	0.01				6.0	6.8	6.5	5.8	9.3
Solids										
TDS	mg/L	10			2,000	1,200	2,100	2,300	3,300	<10
Alkalinity										
Alkalinity (Carbonate as CaCO3)	mg/L	1				<10	<10	<10	<10	89
Alkalinity (Bicarbonate as CaCO3)	mg/L	1				72	400	240	64	220
Alkalinity (Hydroxide) as CaCO3	mg/L	1				<20	<20	<20	<20	<20
Alkalinity (total) as CaCO3	mg/L	1				72	400	240	64	310
Major Ions										
Calcium	mg/L	0.5			1,000	26	83	120	29	20
Chloride	mg/L	1		175		410	500	640	950	67
Magnesium	mg/L	0.5				120	180	180	320	38
Potassium	mg/L	0.5				1.7	2.1	2.4	2.1	41
Sodium	mg/L	0.5		115		150	260	280	400	52
Nitrogen Forms										
Ammonia as N	mg/L	0.01				--	0.10	0.16	--	0.08
Nitrate (as N)	mg/L	0.01	7.2			<0.02	<0.02	<0.02	<0.02	0.03
Nitrite (as N)	mg/L	0.01				<0.02	--	--	<0.02	--
Nitrite + Nitrate as N	mg/L	0.01				<0.05	--	--	<0.05	--
Kjeldahl Nitrogen Total	mg/L	0.1				<0.2	0.3	0.3	0.4	7.8
Nitrogen (Total)	mg/L	0.2				<0.2	--	--	0.4	--
Nitrogen (Organic)	mg/L	0.2				--	0.2	<0.2	--	7.72
Inorganics										
COD	mg/L	10				40	<25	<25	69	210
Sulphate	mg/L	5				280	530	630	1,100	38
TOC	mg/L	1				<5	<5	<5	<5	23
Metals										
Chromium (III+VI)	mg/L	0.001		0.1	1	--	<0.001	<0.001	--	0.002
Chromium (III+VI) (filtered)	mg/L	0.001		0.1	1	<0.001	--	--	<0.001	--
Iron	mg/L	0.05				--	2.0	12	--	1.6
Iron (filtered)	mg/L	0.05				53	--	--	190	--
Manganese	mg/L	0.005	1.9	0.2		--	1.2	0.94	--	0.13
Manganese (filtered)	mg/L	0.005	1.9	0.2		4.7	--	--	5.4	--
Herbicides										
2,4,5-Trichlorophenoxy-propanoic acid	ug/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Other										
Butyric Acid	ug/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000
Hexanoic Acid	ug/L	5,000				<5,000	<5,000	<5,000	<5,000	<5,000

APPENDIX D – QA QC RESULTS

Daylesford Duplicate Results - February 2025

Field ID			BH3	Daylesford SPLIT		BH2	BLIND	
Matrix Type			Water	Water		Water	Water	
Date			24 Feb 2025	24 Feb 2025		24 Feb 2025	24 Feb 2025	
Lab Report Number			1191648	EM2503062	RPD	1191648	1191648	RPD
	Unit	EQL						
EC								
Electrical conductivity *(lab)	uS/cm	1	3,200	3,050	5	2,800	2,700	4
NA								
Acetic Acid	µg/L	5,000	<5,000	--	--	<5,000	<5,000	0
Heptanoic Acid	µg/L	5,000	<5,000	--	--	<5,000	<5,000	0
Isobutyric Acid	µg/L	5,000	<5,000	--	--	<5,000	<5,000	0
Isocaproic Acid	µg/L	5,000	<5,000	--	--	<5,000	<5,000	0
Isovaleric Acid	µg/L	5,000	<5,000	--	--	<5,000	<5,000	0
Valeric Acid	µg/L	5,000	<5,000	--	--	<5,000	<5,000	0
Volatile Fatty Acids (as Acetic Acid)	ug/L	5,000	<5,000	45,000	160	<5,000	<5,000	0
pH								
pH (Lab)	-	0.01	6.5	6.25	4	6.8	6.5	5
Solids								
TDS	mg/L	10	2,300	2,320	1	2,100	1,900	10
Alkalinity								
Alkalinity (Carbonate as CaCO3)	mg/L	1	<10	<1	0	<10	<10	0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	240	238	1	400	320	22
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<20	<1	0	<20	<20	0
Alkalinity (total) as CaCO3	mg/L	1	240	238	1	400	320	22
Major Ions								
Calcium	mg/L	0.5	120	132	10	83	84	1
Chloride	mg/L	1	640	729	13	500	500	0
Magnesium	mg/L	0.5	180	196	9	180	180	0
Potassium	mg/L	0.5	2.4	3	22	2.1	2.0	5
Sodium	mg/L	0.5	280	319	13	260	270	4
Cations Total	meq/L	0.01	--	36.7	--	--	--	--
Anions Total	meq/L	0.01	--	40.3	--	--	--	--
Ionic Balance	%	0.01	--	4.68	--	--	--	--
Nitrogen Forms								
Ammonia as N	mg/L	0.01	0.16	0.18	12	0.10	0.06	50
Nitrate (as N)	mg/L	0.01	<0.02	<0.05	0	<0.02	<0.02	0
Nitrite (as N)	mg/L	0.01	--	<0.05	--	--	--	--
Nitrite + Nitrate as N	mg/L	0.01	--	<0.01	--	--	--	--
Kjeldahl Nitrogen Total	mg/L	0.1	0.3	0.7	80	0.3	0.3	0
Nitrogen (Organic)	mg/L	0.2	<0.2	--	--	0.2	0.24	18
Inorganics								
COD	mg/L	10	<25	<10	0	<25	<25	0
Sulphate	mg/L	5	630	718	13	530	560	6
TOC	mg/L	1	<5	4	0	<5	<5	0
Metals								
Chromium (III+VI)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Iron	mg/L	0.05	12	25.6	72	2.0	2.5	22
Manganese	mg/L	0.005	0.94	--	--	1.2	1.2	0
Zinc (filtered)	mg/L	0.005	--	0.073	--	--	--	--
Herbicides								
2,4,5-Trichlorophenoxy-propanoic acid	ug/L	5,000	<5,000	--	--	<5,000	<5,000	0
Other								
Butyric Acid	ug/L	5,000	<5,000	--	--	<5,000	<5,000	0
Hexanoic Acid	ug/L	5,000	<5,000	--	--	<5,000	<5,000	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Daylesford Rinsate Results February 2025

		Field ID	RINSATE
		Date	24 Feb 2025
		Lab Report Number	1191648
	Unit	EQL	
EC			
Electrical conductivity *(lab)	uS/cm	10	<10
NA			
Acetic Acid	µg/L	5,000	<5,000
Heptanoic Acid	µg/L	5,000	<5,000
Isobutyric Acid	µg/L	5,000	<5,000
Isocaproic Acid	µg/L	5,000	<5,000
Isovaleric Acid	µg/L	5,000	<5,000
Valeric Acid	µg/L	5,000	<5,000
Volatile Fatty Acids (as Acetic Acid)	ug/L	5,000	<5,000
pH			
pH (Lab)	-	0.1	5.8
Solids			
TDS	mg/L	10	<10
Alkalinity			
Alkalinity (Carbonate as CaCO3)	mg/L	10	<10
Alkalinity (Bicarbonate as CaCO3)	mg/L	20	<20
Alkalinity (Hydroxide) as CaCO3	mg/L	20	<20
Alkalinity (total) as CaCO3	mg/L	20	<20
Major Ions			
Calcium	mg/L	0.5	<0.5
Chloride	mg/L	1	<1
Magnesium	mg/L	0.5	<0.5
Potassium	mg/L	0.5	<0.5
Sodium	mg/L	0.5	<0.5
Nitrogen Forms			
Ammonia as N	mg/L	0.01	<0.01
Nitrate (as N)	mg/L	0.02	<0.02
Kjeldahl Nitrogen Total	mg/L	0.2	<0.2
Nitrogen (Organic)	mg/L	0.2	<0.2
Inorganics			
COD	mg/L	25	<25
Sulphate	mg/L	5	<5
TOC	mg/L	5	<5
Metals			
Chromium (III+VI)	mg/L	0.001	<0.001
Iron	mg/L	0.05	<0.05
Manganese	mg/L	0.005	<0.005
Herbicides			
2,4,5-Trichlorophenoxy-propanoic acid	ug/L	5,000	<5,000
Other			
Butyric Acid	ug/L	5,000	<5,000
Hexanoic Acid	ug/L	5,000	<5,000

APPENDIX E – LABORATORY REPORTS

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CHAIN OF CUSTODY

6 Monterey Road,
Dandenong South,
Vic 3175

Client:	Ventia	Job Ref:	Daylesford Landfill 1 of 1
Contact Ventia:	Tarin Cummings 0428091782		TESTS REQUIRED AS PER QUOTE # 230926VENVP
Contact Eurofins:	Savini Suduweli 03 385 645 051		
Email Results to:	Tarin.cummings@ventia.com Lucy.edwards@vventia.com Pandula.R@ventia.com Anastasia.wiltshire@ventia.com Selina.yang@ventia.com		
	Purchase Order Number: 4701075276		

Sample ID	Sample Description	No of Containers	Date Sampled	Time sampled	PH	EC	DO	TEMP	ORP	SWL				
~~BH1~~	~~Groundwater bore~~													
BH2	Groundwater bore	5	24.2.25	11:55	6.12	2896	0.13	14.6	-43	8.55				
BH3	Groundwater bore	5	24.2.25	10:02	5.94	3385	0.27	13.5	-7.5	4.85				
~~BH4~~	~~Groundwater bore~~													
LP1	Leachate Pond	5	24.2.25	11:00	9.28	718	8.25	20.0	-14.7	—				
BLIND	Blind duplicate	5	24.2.25	11:55										
RINSATE	Rinsate blank	5	24.2.25	11:40										

Special Instructions:	Please email Invoices to Tania.Dahlin@ventia.com, Lucy.Edwards@ventia.com

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
	Ventia	24.2.25	12:30	~~Sue Dober~~ EF		25/2/25	11:20 am

This form is for recording of sample data after prior consultation with an analyst regarding sampling procedures and does not over-ride pricing agreements, OHS requirements and our terms and conditions.

As an Occupational Health and Safety consideration, it is a requirement of Ecowise Environmental (Victoria), that all samples received be undamaged and prior advice given in writing of any potential health risks.

LAB USE ONLY

Sample conditions:

Samples received undamaged [Yes/No]

Samples transported at appropriate temperatures [Yes/No]

Samples received within recommended holding times: [Yes/No]

#1191648
LH 2512

Ice 12.8
carrier

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www.eurofins.com.au EnviroSales@eurofinsanz.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	+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 & 2780	Site# 25079

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 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	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: Ventia Utility Services P/L (Grovedale)
Contact name: Tarin Cummings
Project name: DAYLESFORD LANDFILL
Project ID: Not provided
Turnaround time: 5 Day
Date/Time received Feb 25, 2025 11:00 AM
Eurofins reference 1191648

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:

Savini Suduweli on phone : +61 3 8564 5051 or by email: Savini.Suduwelikondage@eurofinsanz.com

Results will be delivered electronically via email to Tarin Cummings - Tarin.Cummings@ventia.com.

Note: A copy of these results will also be delivered to the general Ventia Utility Services P/L (Grovedale) email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.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 & 2780	Site# 25079

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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: Ventia Utility Services P/L (Grovedale)
Address: 27 Essington St
Grovedale
VIC 3216

Project Name: DAYLESFORD LANDFILL

Order No.: 4701075276
Report #: 1191648
Phone: 03 5247 3710
Fax:

Received: Feb 25, 2025 11:00 AM
Due: Mar 4, 2025
Priority: 5 Day
Contact Name: Tarin Cummings

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Chemical Oxygen Demand (COD)	Chromium	Conductivity (at 25 °C)	Iron	Manganese	Nitrate (as N)	pH (at 25 °C)	Total Organic Carbon	Organic Nitrogen Set (as N)	Eurofins Suite B11E: Cl/SO4/Alkalinity	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C	Volatile Fatty Acids (VFA) by GC-MS
Melbourne Laboratory - NATA # 1261 Site # 1254						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	BH2	Feb 24, 2025	11:55AM	Water	M25-Fe0063208	X	X	X	X	X	X	X	X	X	X	X	X	X
2	BH3	Feb 24, 2025	10:02AM	Water	M25-Fe0063209	X	X	X	X	X	X	X	X	X	X	X	X	X
3	LP1	Feb 24, 2025	11:00AM	Water	M25-Fe0063210	X	X	X	X	X	X	X	X	X	X	X	X	X
4	BLIND	Feb 24, 2025	11:55AM	Water	M25-Fe0063211	X	X	X	X	X	X	X	X	X	X	X	X	X
5	RINSATE	Feb 24, 2025	11:40AM	Water	M25-Fe0063212	X	X	X	X	X	X	X	X	X	X	X	X	X
Test Counts						5	5	5	5	5	5	5	5	5	5	5	5	5

Ventia Utility Services P/L (Grovedale)
27 Essington St
Grovedale
VIC 3216

NATA Accredited
Accreditation Number 1261
Site Number 1254

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: **Tarin Cummings**

Report **1191648-W**
Project name DAYLESFORD LANDFILL
Received Date Feb 25, 2025

Client Sample ID			**BH2**	**BH3**	**LP1**	**BLIND**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M25-Fe0063208**	**M25-Fe0063209**	**M25-Fe0063210**	**M25-Fe0063211**
Date Sampled			**Feb 24, 2025**	**Feb 24, 2025**	**Feb 24, 2025**	**Feb 24, 2025**
Test/Reference	LOR	Unit				
Volatile Fatty Acids (VFA) by GC-MS						
Acetic Acid	5	mg/L	< 5	< 5	< 5	< 5
Propionic acid	5	mg/L	< 5	< 5	< 5	< 5
Isobutyric acid	5	mg/L	< 5	< 5	< 5	< 5
Butyric acid	5	mg/L	< 5	< 5	< 5	< 5
Isovaleric acid	5	mg/L	< 5	< 5	< 5	< 5
Valeric acid	5	mg/L	< 5	< 5	< 5	< 5
4-Methylvaleric acid	5	mg/L	< 5	< 5	< 5	< 5
Hexanoic acid	5	mg/L	< 5	< 5	< 5	< 5
Heptanoic acid	5	mg/L	< 5	< 5	< 5	< 5
Total VFA as Acetic Acid Equivalents	5	mg/L	< 5	< 5	< 5	< 5
Ammonia (as N)	0.01	mg/L	0.10	0.16	0.08	0.06
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25	210	< 25
Chloride	1	mg/L	500	640	67	500
Conductivity (at 25 °C)	10	uS/cm	2800	3200	710	2700
Nitrate (as N)	0.02	mg/L	< 0.02	< 0.02	0.03	< 0.02
Organic Nitrogen (as N)*	0.2	mg/L	0.2	< 0.2	7.72	0.24
pH (at 25 °C)	0.1	pH Units	6.8	6.5	9.3	6.5
Sulphate (as SO4)	5	mg/L	530	630	38	560
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	2100	2300	< 10	1900
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	0.3	0.3	7.8	0.3
Total Organic Carbon	5	mg/L	< 5	< 5	23	< 5
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	400	240	220	320
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	89	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	400	240	310	320
Heavy Metals						
Chromium	0.001	mg/L	< 0.001	< 0.001	0.002	< 0.001
Iron	0.05	mg/L	2.0	12	1.6	2.5
Manganese	0.005	mg/L	1.2	0.94	0.13	1.2
Alkali Metals						
Calcium	0.5	mg/L	83	120	20	84
Magnesium	0.5	mg/L	180	180	38	180
Potassium	0.5	mg/L	2.1	2.4	41	2.0
Sodium	0.5	mg/L	260	280	52	270

Client Sample ID			RINSATE
Sample Matrix			Water
Eurofins Sample No.			M25-Fe0063212
Date Sampled			Feb 24, 2025
Test/Reference	LOR	Unit	
Volatile Fatty Acids (VFA) by GC-MS			
Acetic Acid	5	mg/L	< 5
Propionic acid	5	mg/L	< 5
Isobutyric acid	5	mg/L	< 5
Butyric acid	5	mg/L	< 5
Isovaleric acid	5	mg/L	< 5
Valeric acid	5	mg/L	< 5
4-Methylvaleric acid	5	mg/L	< 5
Hexanoic acid	5	mg/L	< 5
Heptanoic acid	5	mg/L	< 5
Total VFA as Acetic Acid Equivalents	5	mg/L	< 5
Ammonia (as N)	0.01	mg/L	< 0.01
Chemical Oxygen Demand (COD)	25	mg/L	< 25
Chloride	1	mg/L	< 1
Conductivity (at 25 °C)	10	uS/cm	< 10
Nitrate (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	5.8
Sulphate (as SO4)	5	mg/L	< 5
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	< 10
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	< 0.2
Total Organic Carbon	5	mg/L	< 5
Alkalinity (speciated)			
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20
Heavy Metals			
Chromium	0.001	mg/L	< 0.001
Iron	0.05	mg/L	< 0.05
Manganese	0.005	mg/L	< 0.005
Alkali Metals			
Calcium	0.5	mg/L	< 0.5
Magnesium	0.5	mg/L	< 0.5
Potassium	0.5	mg/L	< 0.5
Sodium	0.5	mg/L	< 0.5

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 Fatty Acids (VFA) by GC-MS	Melbourne	Feb 26, 2025	28 Day
- Method: LTM-ORG-2360 Determination of Volatile Fatty Acids in Water by GC-MS			
Chemical Oxygen Demand (COD)	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4220 Determination of COD in Water			
Conductivity (at 25 °C)	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4030 Conductivity			
Nitrate (as N)	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
pH (at 25 °C)	Melbourne	Feb 26, 2025	6 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Organic Carbon	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11C: Na/K/Ca/Mg	Melbourne	Feb 26, 2025	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Ammonia (as N)	Melbourne	Feb 26, 2025	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Organic Nitrogen (as N)*	Melbourne	Feb 25, 2025	7 Days
- Method: APHA 4500 Organic Nitrogen (N)			
Total Kjeldahl Nitrogen (as N)	Melbourne	Feb 26, 2025	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Feb 26, 2025	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Melbourne	Feb 26, 2025	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			

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email: EnviroSales@eurofinsanz.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
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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

Company Name: Ventia Utility Services P/L (Grovedale)
Address: 27 Essington St
Grovedale
VIC 3216

Project Name: DAYLESFORD LANDFILL

Order No.: 4701075276
Report #: 1191648
Phone: 03 5247 3710
Fax:

Received: Feb 25, 2025 11:00 AM
Due: Mar 4, 2025
Priority: 5 Day
Contact Name: Tarin Cummings

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Chemical Oxygen Demand (COD)	Chromium	Conductivity (at 25 °C)	Iron	Manganese	Nitrate (as N)	pH (at 25 °C)	Total Organic Carbon	Organic Nitrogen Set (as N)	Eurofins Suite B11E: Cl/SO4/Alkalinity	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C	Volatile Fatty Acids (VFA) by GC-MS
Melbourne Laboratory - NATA # 1261 Site # 1254						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	BH2	Feb 24, 2025	11:55AM	Water	M25-Fe0063208	X	X	X	X	X	X	X	X	X	X	X	X	X
2	BH3	Feb 24, 2025	10:02AM	Water	M25-Fe0063209	X	X	X	X	X	X	X	X	X	X	X	X	X
3	LP1	Feb 24, 2025	11:00AM	Water	M25-Fe0063210	X	X	X	X	X	X	X	X	X	X	X	X	X
4	BLIND	Feb 24, 2025	11:55AM	Water	M25-Fe0063211	X	X	X	X	X	X	X	X	X	X	X	X	X
5	RINSATE	Feb 24, 2025	11:40AM	Water	M25-Fe0063212	X	X	X	X	X	X	X	X	X	X	X	X	X
Test Counts						5	5	5	5	5	5	5	5	5	5	5	5	5

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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. 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 where annotated.
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 sampling date; 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 (CU)	

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 50 – 150%

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							
Chemical Oxygen Demand (COD)	mg/L	< 25			25	Pass	
Nitrate (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 Organic Carbon	mg/L	< 5			5	Pass	
Method Blank							
Heavy Metals							
Chromium	mg/L	< 0.001			0.001	Pass	
Iron	mg/L	< 0.05			0.05	Pass	
Manganese	mg/L	< 0.005			0.005	Pass	
Method Blank							
Chloride	mg/L	< 1			1	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Conductivity (at 25 °C)	uS/cm	< 10			10	Pass	
Method Blank							
Volatile Fatty Acids (VFA) by GC-MS							
Acetic Acid	mg/L	< 5			5	Pass	
Propionic acid	mg/L	< 5			5	Pass	
Isobutyric acid	mg/L	< 5			5	Pass	
Butyric acid	mg/L	< 5			5	Pass	
Isovaleric acid	mg/L	< 5			5	Pass	
Valeric acid	mg/L	< 5			5	Pass	
4-Methylvaleric acid	mg/L	< 5			5	Pass	
Hexanoic acid	mg/L	< 5			5	Pass	
Heptanoic acid	mg/L	< 5			5	Pass	
Total VFA as Acetic Acid Equivalents	mg/L	< 5			5	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	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							
Volatile Fatty Acids (VFA) by GC-MS							
Total VFA as Acetic Acid Equivalents	%	113			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	108			70-130	Pass	
Chemical Oxygen Demand (COD)	%	93			70-130	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	84			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	94			70-130	Pass	
Total Organic Carbon	%	115			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	109			70-130	Pass	
Total Alkalinity (as CaCO3)	%	111			70-130	Pass	
LCS - % Recovery							
Chloride	%	108			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Sulphate (as SO4)	%	120			70-130	Pass	
LCS - % Recovery							
Conductivity (at 25 °C)	%	100			70-130	Pass	
Sulphate (as SO4)	%	121			70-130	Pass	
LCS - % Recovery							
Volatile Fatty Acids (VFA) by GC-MS							
Acetic Acid	%	108			70-130	Pass	
Propionic acid	%	108			70-130	Pass	
Isobutyric acid	%	99			70-130	Pass	
Butyric acid	%	104			70-130	Pass	
Isovaleric acid	%	108			70-130	Pass	
Valeric acid	%	116			70-130	Pass	
4-Methylvaleric acid	%	111			70-130	Pass	
Hexanoic acid	%	113			70-130	Pass	
Heptanoic acid	%	110			70-130	Pass	
LCS - % Recovery							
Chloride	%	110			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Chromium	%	96			80-120	Pass	
Iron	%	93			80-120	Pass	
Manganese	%	94			80-120	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	95			80-120	Pass	
Magnesium	%	93			80-120	Pass	
Potassium	%	92			80-120	Pass	
Sodium	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Chemical Oxygen Demand (COD)	M25-Fe0063355	NCP	%	109			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	M25-Fe0063419	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Chromium	M25-Fe0060789	NCP	%	97			75-125	Pass	
Iron	M25-Fe0060789	NCP	%	90			75-125	Pass	
Manganese	M25-Fe0061902	NCP	%	97			75-125	Pass	
Spike - % Recovery									
Volatile Fatty Acids (VFA) by GC-MS				Result 1					
Isobutyric acid	M25-Fe0063209	CP	%	106			70-130	Pass	
Isovaleric acid	M25-Fe0063209	CP	%	104			70-130	Pass	
Valeric acid	M25-Fe0063209	CP	%	103			70-130	Pass	
4-Methylvaleric acid	M25-Fe0063209	CP	%	111			70-130	Pass	
Hexanoic acid	M25-Fe0063209	CP	%	103			70-130	Pass	
Heptanoic acid	M25-Fe0063209	CP	%	102			70-130	Pass	
Total VFA as Acetic Acid Equivalents	M25-Fe0063209	CP	%	107			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	M25-Fe0063209	CP	%	112			70-130	Pass	
Nitrate (as N)	M25-Fe0063209	CP	%	118			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Calcium	M25-Fe0063209	CP	%	110			75-125	Pass	
Magnesium	M25-Fe0063209	CP	%	119			75-125	Pass	
Potassium	M25-Fe0063209	CP	%	105			75-125	Pass	
Sodium	M25-Fe0063209	CP	%	124			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Volatile Fatty Acids (VFA) by GC-MS				Result 1	Result 2	RPD			
Acetic Acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Propionic acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Isobutyric acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Butyric acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Isovaleric acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Valeric acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
4-Methylvaleric acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Hexanoic acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Heptanoic acid	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	M25-Fe0063208	CP	mg/L	0.10	0.09	12	30%	Pass	
Chemical Oxygen Demand (COD)	S25-Fe0059139	NCP	mg/L	1100	1100	2.0	30%	Pass	
Conductivity (at 25 °C)	M25-Fe0063657	NCP	uS/cm	5800	5800	<1	30%	Pass	
Nitrate (as N)	M25-Fe0063208	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
pH (at 25 °C)	M25-Fe0063657	NCP	pH Units	6.9	6.9	pass	30%	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	M25-Fe0063546	NCP	mg/L	2200	1900	16	30%	Pass	
Total Kjeldahl Nitrogen (as N)	M25-Fe0048159	NCP	mg/L	< 0.2	< 0.2	<1	30%	Pass	
Total Organic Carbon	M25-Fe0063208	CP	mg/L	< 5	< 5	<1	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M25-Fe0063657	NCP	mg/L	430	450	3.6	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M25-Fe0063657	NCP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M25-Fe0063657	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M25-Fe0063657	NCP	mg/L	430	450	3.6	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Chromium	M25-Fe0060789	NCP	mg/L	0.003	0.003	2.0	30%	Pass	
Iron	M25-Fe0060789	NCP	mg/L	0.24	0.23	3.0	30%	Pass	
Manganese	M25-Fe0060789	NCP	mg/L	0.95	0.93	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	M25-Fe0063209	CP	mg/L	640	660	3.0	30%	Pass	
Sulphate (as SO4)	M25-Fe0063209	CP	mg/L	630	630	<1	30%	Pass	
Total Organic Carbon	M25-Fe0063209	CP	mg/L	< 5	< 5	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M25-Fe0063209	CP	mg/L	120	120	<1	30%	Pass	
Magnesium	M25-Fe0063209	CP	mg/L	180	170	<1	30%	Pass	
Potassium	M25-Fe0063209	CP	mg/L	2.4	2.5	2.0	30%	Pass	
Sodium	M25-Fe0063209	CP	mg/L	280	280	<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

Authorised by:

Savini Suduweli	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Organic
Luke Holt	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal

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

6 Monterey Road,
Dandenong South,
Vic 3175

Client:	Ventia	Job Ref:	Daylesford Landfill 1 of 1
Contact Ventia:	Tarin Cummings 0428091782	TESTS REQUIRED AS PER QUOTE # 230926VENVP	
Contact Eurofins:	Savini Suduweli 03 385 645 051		
Email Results to:	Tarin.cummings@ventia.com Lucy.edwards@vventia.com Pandula.R@ventia.com Anastasia.wiltshire@ventia.com Selina.yang@ventia.com		
	Purchase Order Number: 4701075276		

Sample ID	Sample Description	No of Containers	Date Sampled	Time sampled	PH	EC	DO	TEMP	ORP	SWL				
BH1	Groundwater bore	5	28.2.2025	9:46	5.37	1908	0.32	15.5	-16.9	18.45				
~~BH2~~	~~Groundwater bore~~													
~~BH3~~	~~Groundwater bore~~													
BH4	Groundwater bore	5	28.2.2025	10:53	5.34	4575	0.2	15.6	-20.9	26.85				
~~LP1~~	~~Leachate Pond~~													
~~BLIND~~	~~Blind duplicate~~													
~~RINSATE~~	~~Rinsate blank~~													

Special Instructions:	Please email Invoices to Tania.Dahlin@ventia.com, Lucy.Edwards@ventia.com						
Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
	Ventia	28.2.2025	1500				

This form is for recording of sample data after prior consultation with an analyst regarding sampling procedures and does not over-ride pricing agreements, OHS requirements and our terms and conditions.

As an Occupational Health and Safety consideration, it is a requirement of Ecowise Environmental (Victoria), that all samples received be undamaged and prior advice given in writing of any potential health risks.

LAB USE ONLY

Sample conditions: Samples received undamaged [Yes/No]

Samples transported at appropriate temperatures [Yes/No]

Samples received within recommended holding times: [Yes/No]

Date/Time: 28/2/25 @ 2:40PM

Chilled: Yes/No

Temp: 11.6°C

Correction:

Final Temp:

#093731
3/3/25

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofinsanz.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	+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 & 2780	Site# 25079

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 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	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: Ventia Utility Services P/L (Grovedale)
Contact name: Tarin Cummings
Project name: Daylesford Landfil
Project ID: Not provided
Turnaround time: 5 Day
Date/Time received Feb 28, 2025 2:40 PM
Eurofins reference 1193731

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:

Savini Suduweli on phone : +61 3 8564 5051 or by email: Savini.Suduwelikondage@eurofinsanz.com

Results will be delivered electronically via email to Tarin Cummings - Tarin.Cummings@ventia.com.

Note: A copy of these results will also be delivered to the general Ventia Utility Services P/L (Grovedale) email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.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	+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 & 2780	Site# 25079

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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: Ventia Utility Services P/L (Grovedale)
Address: 27 Essington St
Grovedale
VIC 3216

Project Name: Daylesford Landfil

Order No.: 4701075276
Report #: 1193731
Phone: 03 5247 3710
Fax:

Received: Feb 28, 2025 2:40 PM
Due: Mar 7, 2025
Priority: 5 Day
Contact Name: Tarin Cummings

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail	Chemical Oxygen Demand (COD)	Chromium (filtered)	Conductivity (at 25 °C)	Iron (filtered)	Manganese (filtered)	pH (at 25 °C)	Total Organic Carbon	Total Nitrogen Set (as N)	Eurofins Suite B11E: Cl/SO4/Alkalinity	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C	Volatile Fatty Acids (VFA) by GC-MS
Melbourne Laboratory - NATA # 1261 Site # 1254	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	BH1	Feb 28, 2025		Water	M25-Ma0002959	X	X	X	X	X	X	X	X	X	X	X	X
2	BH4	Feb 28, 2025		Water	M25-Ma0002960	X	X	X	X	X	X	X	X	X	X	X	X
Test Counts						2	2	2	2	2	2	2	2	2	2	2	2

Ventia Utility Services P/L (Grovedale)
27 Essington St
Grovedale
VIC 3216

NATA Accredited
Accreditation Number 1261
Site Number 1254

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: **Tarin Cummings**

Report **1193731-W**
Project name Daylesford Landfil
Received Date Feb 28, 2025

Client Sample ID			**BH1**	**BH4**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**M25-Ma0002959**	**M25-Ma0002960**
Date Sampled			**Feb 28, 2025**	**Feb 28, 2025**
Test/Reference	LOR	Unit		
Volatile Fatty Acids (VFA) by GC-MS				
Acetic Acid	5	mg/L	< 5	< 5
Propionic acid	5	mg/L	< 5	< 5
Isobutyric acid	5	mg/L	< 5	< 5
Butyric acid	5	mg/L	< 5	< 5
Isovaleric acid	5	mg/L	< 5	< 5
Valeric acid	5	mg/L	< 5	< 5
4-Methylvaleric acid	5	mg/L	< 5	< 5
Hexanoic acid	5	mg/L	< 5	< 5
Heptanoic acid	5	mg/L	< 5	< 5
Total VFA as Acetic Acid Equivalents	5	mg/L	< 5	< 5
Chemical Oxygen Demand (COD)	25	mg/L	40	69
Chloride	1	mg/L	410	950
Conductivity (at 25 °C)	10	uS/cm	1700	4100
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	< 0.05
Nitrate (as N)	0.02	mg/L	< 0.02	< 0.02
Nitrite (as N)	0.02	mg/L	< 0.02	< 0.02
pH (at 25 °C)	0.1	pH Units	6.0	5.8
Sulphate (as SO4)	5	mg/L	280	1100
Total Dissolved Solids Dried at 180 °C ± 2 °C	10	mg/L	1200	3300
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	< 0.2	0.4
Total Nitrogen (as N)*	0.2	mg/L	< 0.2	0.4
Total Organic Carbon	5	mg/L	< 5	< 5
Alkalinity (speciated)				
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	72	64
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	72	64
Heavy Metals				
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001
Iron (filtered)	0.05	mg/L	53	190
Manganese (filtered)	0.005	mg/L	4.7	5.4

Client Sample ID			BH1	BH4
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**M25-Ma0002959**	**M25-Ma0002960**
Date Sampled			**Feb 28, 2025**	**Feb 28, 2025**
Test/Reference	LOR	Unit		
Alkali Metals				
Calcium	0.5	mg/L	26	29
Magnesium	0.5	mg/L	120	320
Potassium	0.5	mg/L	1.7	2.1
Sodium	0.5	mg/L	150	400

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 Fatty Acids (VFA) by GC-MS	Melbourne	Mar 04, 2025	28 Day
- Method: LTM-ORG-2360 Determination of Volatile Fatty Acids in Water by GC-MS			
Chemical Oxygen Demand (COD)	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4220 Determination of COD in Water			
Conductivity (at 25 °C)	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4030 Conductivity			
pH (at 25 °C)	Melbourne	Mar 04, 2025	6 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Organic Carbon	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals (filtered)	Melbourne	Mar 04, 2025	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11C: Na/K/Ca/Mg	Melbourne	Mar 04, 2025	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Mar 04, 2025	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Nitrogen Set (as N)			
Nitrate & Nitrite (as N)	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Nitrate (as N)	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Nitrite (as N)	Melbourne	Mar 04, 2025	2 Days
- Method: LTM-INO-4450 Nitrogens by Discrete Analyser			
Total Kjeldahl Nitrogen (as N)	Melbourne	Mar 04, 2025	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Total Dissolved Solids Dried at 180 °C ± 2 °C	Melbourne	Mar 04, 2025	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.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	+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 & 2780	Site# 25079

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 & 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	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: Ventia Utility Services P/L (Grovedale)
Address: 27 Essington St
Grovedale
VIC 3216

Project Name: Daylesford Landfil

Order No.: 4701075276
Report #: 1193731
Phone: 03 5247 3710
Fax:

Received: Feb 28, 2025 2:40 PM
Due: Mar 7, 2025
Priority: 5 Day
Contact Name: Tarin Cummings

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail	Chemical Oxygen Demand (COD)	Chromium (filtered)	Conductivity (at 25 °C)	Iron (filtered)	Manganese (filtered)	pH (at 25 °C)	Total Organic Carbon	Total Nitrogen Set (as N)	Eurofins Suite B11E: Cl/SO4/Alkalinity	Eurofins Suite B11C: Na/K/Ca/Mg	Total Dissolved Solids Dried at 180 °C ± 2 °C	Volatile Fatty Acids (VFA) by GC-MS
Melbourne Laboratory - NATA # 1261 Site # 1254	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	BH1	Feb 28, 2025		Water	M25-Ma0002959	X	X	X	X	X	X	X	X	X	X	X	X
2	BH4	Feb 28, 2025		Water	M25-Ma0002960	X	X	X	X	X	X	X	X	X	X	X	X
Test Counts						2	2	2	2	2	2	2	2	2	2	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. 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 where annotated.
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 sampling date; 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 (CU)	

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 50 – 150%

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 Fatty Acids (VFA) by GC-MS							
Acetic Acid	mg/L	< 5			5	Pass	
Propionic acid	mg/L	< 5			5	Pass	
Isobutyric acid	mg/L	< 5			5	Pass	
Butyric acid	mg/L	< 5			5	Pass	
Isovaleric acid	mg/L	< 5			5	Pass	
Valeric acid	mg/L	< 5			5	Pass	
4-Methylvaleric acid	mg/L	< 5			5	Pass	
Hexanoic acid	mg/L	< 5			5	Pass	
Heptanoic acid	mg/L	< 5			5	Pass	
Total VFA as Acetic Acid Equivalents	mg/L	< 5			5	Pass	
Method Blank							
Chemical Oxygen Demand (COD)	mg/L	< 25			25	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	
Nitrate (as N)	mg/L	< 0.02			0.02	Pass	
Nitrite (as N)	mg/L	< 0.02			0.02	Pass	
Sulphate (as SO4)	mg/L	< 5			5	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 Organic Carbon	mg/L	< 5			5	Pass	
Method Blank							
Heavy Metals							
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Manganese (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							
Volatile Fatty Acids (VFA) by GC-MS							
Acetic Acid	%	118			70-130	Pass	
Propionic acid	%	113			70-130	Pass	
Isobutyric acid	%	108			70-130	Pass	
Butyric acid	%	110			70-130	Pass	
Isovaleric acid	%	105			70-130	Pass	
Valeric acid	%	105			70-130	Pass	
4-Methylvaleric acid	%	116			70-130	Pass	
Hexanoic acid	%	105			70-130	Pass	
Heptanoic acid	%	104			70-130	Pass	
Total VFA as Acetic Acid Equivalents	%	113			70-130	Pass	
LCS - % Recovery							
Chemical Oxygen Demand (COD)	%	96			70-130	Pass	
Conductivity (at 25 °C)	%	104			70-130	Pass	
Nitrate & Nitrite (as N)	%	104			70-130	Pass	
Nitrite (as N)	%	89			70-130	Pass	
Sulphate (as SO4)	%	103			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Dissolved Solids Dried at 180 °C ± 2 °C	%	92			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	%	93			70-130	Pass	
Total Organic Carbon	%	86			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	103			70-130	Pass	
Total Alkalinity (as CaCO3)	%	107			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	98			80-120	Pass	
Magnesium	%	103			80-120	Pass	
Potassium	%	100			80-120	Pass	
Sodium	%	102			80-120	Pass	
LCS - % Recovery							
Chloride	%	103			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Volatile Fatty Acids (VFA) by GC-MS				Result 1					
Isobutyric acid	M25-Ma0002959	CP	%	101			70-130	Pass	
Isovaleric acid	M25-Ma0002959	CP	%	86			70-130	Pass	
Valeric acid	M25-Ma0002959	CP	%	95			70-130	Pass	
4-Methylvaleric acid	M25-Ma0002959	CP	%	100			70-130	Pass	
Hexanoic acid	M25-Ma0002959	CP	%	92			70-130	Pass	
Heptanoic acid	M25-Ma0002959	CP	%	90			70-130	Pass	
Total VFA as Acetic Acid Equivalents	M25-Fe0063209	NCP	%	107			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chemical Oxygen Demand (COD)	M25-Ma0002959	CP	%	97			70-130	Pass	
Chloride	M25-Ma0002959	CP	%	97			70-130	Pass	
Nitrate & Nitrite (as N)	M25-Ma0002959	CP	%	85			70-130	Pass	
Nitrite (as N)	M25-Ma0002959	CP	%	98			70-130	Pass	
Sulphate (as SO4)	M25-Ma0002959	CP	%	108			70-130	Pass	
Total Kjeldahl Nitrogen (as N)	M25-Ma0002959	CP	%	93			70-130	Pass	
Total Organic Carbon	M25-Ma0008864	NCP	%	112			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Chromium (filtered)	M25-Ma0004406	NCP	%	86			75-125	Pass	
Iron (filtered)	M25-Ma0004406	NCP	%	91			75-125	Pass	
Manganese (filtered)	M25-Fe0068595	NCP	%	86			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M25-Ma0006264	NCP	%	99			75-125	Pass	
Magnesium	M25-Ma0006264	NCP	%	108			75-125	Pass	
Potassium	M25-Ma0006264	NCP	%	101			75-125	Pass	
Sodium	M25-Ma0004406	NCP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25 °C)	M25-Ma0002959	CP	uS/cm	1700	1700	1.6	30%	Pass	
pH (at 25 °C)	M25-Ma0002959	CP	pH Units	6.0	6.0	pass	30%	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	M25-Ma0006266	NCP	mg/L	5500	5100	7.3	30%	Pass	
Total Organic Carbon	M25-Ma0002959	CP	mg/L	< 5	< 5	<1	30%	Pass	

Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M25-Ma0002959	CP	mg/L	72	75	4.1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M25-Ma0002959	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M25-Ma0002959	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M25-Ma0002959	CP	mg/L	72	75	4.1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Chromium (filtered)	M25-Ma0004406	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iron (filtered)	M25-Ma0004406	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Manganese (filtered)	M25-Ma0004406	NCP	mg/L	0.33	0.33	2.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M25-Ma0006264	NCP	mg/L	59	59	<1	30%	Pass	
Magnesium	M25-Ma0006264	NCP	mg/L	240	230	4.0	30%	Pass	
Potassium	M25-Ma0006264	NCP	mg/L	62	61	1.0	30%	Pass	
Sodium	M25-Ma0006264	NCP	mg/L	3100	3000	3.0	30%	Pass	
Duplicate									
Volatile Fatty Acids (VFA) by GC-MS				Result 1	Result 2	RPD			
Acetic Acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Propionic acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Isobutyric acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Butyric acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Isovaleric acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Valeric acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
4-Methylvaleric acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Hexanoic acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Heptanoic acid	M25-Ma0002960	CP	mg/L	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chemical Oxygen Demand (COD)	M25-Ma0002960	CP	mg/L	69	76	10	30%	Pass	
Chloride	M25-Ma0002960	CP	mg/L	950	950	<1	30%	Pass	
Conductivity (at 25 °C)	M25-Ma0002960	CP	uS/cm	4100	4200	3.7	30%	Pass	
Nitrate & Nitrite (as N)	M25-Ma0002960	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Nitrite (as N)	M25-Ma0002960	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
pH (at 25 °C)	M25-Ma0002960	CP	pH Units	5.8	5.8	pass	30%	Pass	
Sulphate (as SO4)	M25-Ma0002960	CP	mg/L	1100	1100	1.0	30%	Pass	
Total Kjeldahl Nitrogen (as N)	M25-Ma0002960	CP	mg/L	0.4	0.5	14	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M25-Ma0002960	CP	mg/L	64	66	3.1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M25-Ma0002960	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M25-Ma0002960	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M25-Ma0002960	CP	mg/L	64	66	3.1	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

Authorised by:

Savini Suduweli	Analytical Services Manager
Carroll Lee	Senior Analyst-Organic
Emily Rosenberg	Senior Analyst-Metal
Luke Holt	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal

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.

CHAIN OF CUSTODY

2-4 Westall Rd,
Springvale VIC 3171

ALS Group

FREIGHT

Client:	Ventia	Job Ref:	Daylesford Landfill CoC 1 of 1
Contact Ventia:	Tarin Cummings 0428091782		Please forward to ALS for analysis
Contact ALS:	Graeme Jablonskas 03 8549 9609		
Email:	Tarin.cummings@ventia.com Lucy.edwards@vventia.com Pandula.R@ventia.com Anastasia.wiltshire@ventia.com Selina.yang@ventia.com		
	Lab Quote #: EM23THISER0010		
	Purchase Order Number: 4701075273		

Environmental Division
Melbourne
Work Order Reference
EM2503062

Telephone : + 61-3-8549 9600

Sample ID	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	PH	EC	DO	TEMP	ORP	SWL
Daylesford SPLIT	Groundwater	5	24.2.25	10:02		5.94	3385	0.27	13.5	-7.5	4.85

Special Instructions: Please email Invoices to Tania.Dahlin@ventia.com, Lucy.Edwards@ventia.com

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
	Ventia	24.2.25	12:30			25/2	08 20
Relinquished By:	**Company:**	**Date:**	**Time:**	**Received By:**	**Company:**	**Date:**	**Time:**

This form is for recording of sample data after prior consultation with an analyst regarding sampling procedures and does not over-ride pricing agreements, OHS requirements and our terms and conditions.

As an Occupational Health and Safety consideration, it is a requirement of Ecowise Environmental (Victoria), that all samples received be undamaged and prior advice given in writing of any potential health risks.

LAB USE ONLY

Sample conditions:
Samples received undamaged [Yes/No]
Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EM2503062**		
Client	: **VENTIA UTILITY SERVICES PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR TARIN CUMMINGS	Contact	: Graeme Jablonskas
Address	: 27 ESSINGTON STREET GROVEDALE VICTORIA, AUSTRALIA 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: tarin.cummings@ventia.com.au	E-mail	: graeme.jablonskas@alsglobal.com
Telephone	: +61 03 5249 3610	Telephone	: +6138549 9609
Facsimile	: +61 03 5221 9711	Facsimile	: +61-3-8549 9626
Project	: Daylesford Landfill COC 1 of 1	Page	: 1 of 3
Order number	: 4701075273	Quote number	: EM2023THISER0010 (EM23THISER0010 - SECONDARY SAMPLES ONLY)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: LANDFILL		
Sampler	:		

Dates

Date Samples Received	: 25-Feb-2025 10:20	Issue Date	: 25-Feb-2025
Client Requested Due Date	: 04-Mar-2025	Scheduled Reporting Date	: **04-Mar-2025**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 6.7°C - Ice present
Receipt Detail	:	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
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Melbourne, NATA accreditation no. 825, site no. 13778.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **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: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EA005P pH (Auto Titrator)	WATER - EA010P Electrical Conductivity (Auto Titrator)	WATER - EK055G Ammonia as N By Discrete Analyser	WATER - EK058G Nitrate as N by Discrete Analyser	WATER - EK061G Total Kjeldahl Nitrogen as N (TKN) By Discrete	WATER - EP005 Total Organic Carbon (TOC)	WATER - EP045 Volatile Acids as CH3COOH
EM2503062-001	24-Feb-2025 10:02	Daylesford SPLIT	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EG020F Dissolved Metals by ICP/MS	WATER - EN67-B02 Field Tests (performed by external sampler)	WATER - EP026SP Chemical Oxygen Demand (COD)	WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity
EM2503062-001	24-Feb-2025 10:02	Daylesford SPLIT	✓	✓	✓	✓	✓

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: **WATER** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
				Date	Evaluation	Date	Evaluation
EA005-P: pH by Auto Titrator							
Daylesford SPLIT	Clear Plastic Bottle - Natural	----	24-Feb-2025	25-Feb-2025	✘	----	----

Requested Deliverables

ACCOUNTS PAYABLE		
- A4 - AU Tax Invoice (INV)	Email	Invoices@ventia.com.au
ANASTASIA WILTSHIRE		
- *AU Certificate of Analysis - NATA (COA)	Email	anastasia.wiltshire@ventia.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	anastasia.wiltshire@ventia.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	anastasia.wiltshire@ventia.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	anastasia.wiltshire@ventia.com
- Chain of Custody (CoC) (COC)	Email	anastasia.wiltshire@ventia.com
- EDI Format - ESDAT (ESDAT)	Email	anastasia.wiltshire@ventia.com
LUCY EDWARDS		
- *AU Certificate of Analysis - NATA (COA)	Email	Lucy.Edwards@ventia.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Lucy.Edwards@ventia.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Lucy.Edwards@ventia.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Lucy.Edwards@ventia.com
- A4 - AU Tax Invoice (INV)	Email	Lucy.Edwards@ventia.com
- Chain of Custody (CoC) (COC)	Email	Lucy.Edwards@ventia.com
- EDI Format - ESDAT (ESDAT)	Email	Lucy.Edwards@ventia.com
Pandula R		
- *AU Certificate of Analysis - NATA (COA)	Email	pandula.r@ventia.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	pandula.r@ventia.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	pandula.r@ventia.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	pandula.r@ventia.com
- Chain of Custody (CoC) (COC)	Email	pandula.r@ventia.com
- EDI Format - ESDAT (ESDAT)	Email	pandula.r@ventia.com
SELINA YANG		
- *AU Certificate of Analysis - NATA (COA)	Email	selina.yang@ventia.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	selina.yang@ventia.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	selina.yang@ventia.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	selina.yang@ventia.com
- Chain of Custody (CoC) (COC)	Email	selina.yang@ventia.com
- EDI Format - ESDAT (ESDAT)	Email	selina.yang@ventia.com
TARIN CUMMINGS		
- *AU Certificate of Analysis - NATA (COA)	Email	tarin.cummings@ventia.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	tarin.cummings@ventia.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	tarin.cummings@ventia.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	tarin.cummings@ventia.com.au
- A4 - AU Tax Invoice (INV)	Email	tarin.cummings@ventia.com.au
- Chain of Custody (CoC) (COC)	Email	tarin.cummings@ventia.com.au
- EDI Format - ESDAT (ESDAT)	Email	tarin.cummings@ventia.com.au

CERTIFICATE OF ANALYSIS

Work Order	: **EM2503062**	Page	: 1 of 4
Client	: **VENTIA UTILITY SERVICES PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR TARIN CUMMINGS	Contact	: Graeme Jablonskas
Address	: 27 ESSINGTON STREET GROVEDALE VICTORIA, AUSTRALIA 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 5249 3610	Telephone	: +6138549 9609
Project	: Daylesford Landfill COC 1 of 1	Date Samples Received	: 25-Feb-2025 10:20
Order number	: 4701075273	Date Analysis Commenced	: 25-Feb-2025
C-O-C number	: ----	Issue Date	: 04-Mar-2025 20:53
Sampler	: ----		
Site	: LANDFILL		
Quote number	: EM23THISER0010 - SECONDARY SAMPLES ONLY		
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

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*
Dilani Fernando	Laboratory Coordinator	Melbourne External Subcontracting, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC

General Comments

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

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

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

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

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

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

- EK057G: EM2503062 #1 Sample required dilution for Nitrite prior to analysis due to sample matrix. LOR has been raised accordingly.
- 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: GROUNDWATER (Matrix: WATER)			Sample ID	Daylesford SPLIT	----	----	----	----
			Sampling date / time	24-Feb-2025 10:02	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2503062-001	--------	--------	--------	--------
				Result	----	----	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**6.25**	----	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**3050**	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**2320**	----	----	----	----
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	**238**	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	**238**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**718**	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**729**	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**132**	----	----	----	----
Magnesium	7439-95-4	1	mg/L	**196**	----	----	----	----
Sodium	7440-23-5	1	mg/L	**319**	----	----	----	----
Potassium	7440-09-7	1	mg/L	**3**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	**0.073**	----	----	----	----
Iron	7439-89-6	0.05	mg/L	**25.6**	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.18**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.05	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser								

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	Daylesford SPLIT	----	----	----	----
				Sampling date / time	24-Feb-2025 10:02	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2503062-001	--------	--------	--------	--------
					Result	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser - Continued									
Nitrate as N	14797-55-8	0.01	mg/L		<0.05	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.7**	----	----	----	----
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**40.3**	----	----	----	----
ø Total Cations	----	0.01	meq/L		**36.7**	----	----	----	----
ø Ionic Balance	----	0.01	%		**4.68**	----	----	----	----
EN67: Field Tests									
ø Dissolved Oxygen	----	0.1	mg/L		**0.27**	----	----	----	----
ø pH	----	0.01	pH Unit		**5.94**	----	----	----	----
ø Redox Potential	----	0.1	mV		**-7.5**	----	----	----	----
ø Temperature	----	0.1	°C		**13.5**	----	----	----	----
ø Electrical Conductivity (Temperature Compensated)	COND_TEMP	1	µS/cm		**3385**	----	----	----	----
EN67: Field Tests (non-NATA)									
ø Standing Water Level	----	0.01	m		**4.85**	----	----	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**4**	----	----	----	----
EP026SP: Chemical Oxygen Demand (Spectrophotometric)									
Chemical Oxygen Demand	----	10	mg/L		<10	----	----	----	----
EP045: Volatile Acids as CH3COOH									
Volatile Acids as Acetic Acid	----	5	mg/L		**45**	----	----	----	----

QUALITY CONTROL REPORT

Work Order	: **EM2503062**	Page	: 1 of 7
Client	: **VENTIA UTILITY SERVICES PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR TARIN CUMMINGS	Contact	: Graeme Jablonskas
Address	: 27 ESSINGTON STREET GROVEDALE VICTORIA, AUSTRALIA 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 5249 3610	Telephone	: +6138549 9609
Project	: Daylesford Landfill COC 1 of 1	Date Samples Received	: 25-Feb-2025
Order number	: 4701075273	Date Analysis Commenced	: 25-Feb-2025
C-O-C number	: ----	Issue Date	: 04-Mar-2025
Sampler	: ----		
Site	: LANDFILL		
Quote number	: EM23THISER0010 - SECONDARY SAMPLES ONLY		
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*
Dilani Fernando	Laboratory Coordinator	Melbourne External Subcontracting, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC

General Comments

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

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

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = 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: 6401324)									
EM2503091-009	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.11	7.11	0.0	0% - 20%
EM2503076-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	8.19	8.25	0.7	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 6401322)									
EM2503058-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	4	4	0.0	No Limit
EM2503076-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	8620	8600	0.2	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 6409014)									
EM2502997-004	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	1630	1420	13.2	0% - 20%
EM2503063-011	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	5100	5140	0.6	0% - 20%
EM2503086-005	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	16700	16600	0.6	0% - 20%
EM2502952-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	1180	1140	3.4	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 6401321)									
EM2502997-005	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	808	808	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	808	808	0.0	0% - 20%
EM2503076-001	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	428	427	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	428	427	0.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6400662)									

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 (%)
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6400662) - continued									
EM2503057-007	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	183	186	1.6	0% - 20%
EM2502977-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	42	42	0.0	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6400663)									
EM2503057-007	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	1060	1080	1.3	0% - 20%
EM2502977-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	75	74	1.6	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6406615)									
EM2503062-001	Daylesford SPLIT	ED093F: Calcium	7440-70-2	1	mg/L	132	130	1.3	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	196	193	1.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	319	311	2.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	3	3	0.0	No Limit
EM2503165-004	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	114	113	1.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	157	155	1.3	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	1130	1110	2.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	4	4	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 6406613)									
EM2503145-005	Anonymous	EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.020	0.019	5.8	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	2.39	2.37	1.0	0% - 20%
EM2502728-001	Anonymous	EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.007	0.006	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 6401423)									
EM2502728-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EM2502910-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	2.98	2.99	0.4	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 6400660)									
EM2503057-007	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EM2502977-001	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: 6401424)									
EM2502728-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	16.6	16.7	0.2	0% - 20%
EM2502910-001	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: 6406067)									
EM2502754-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1 (1.0)*	mg/L	588	568	3.6	0% - 20%
EM2502838-005	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1 (0.2)*	mg/L	0.5	0.4	0.0	No Limit
EP005: Total Organic Carbon (TOC) (QC Lot: 6412481)									
EM2502771-003	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	43	41	4.2	0% - 20%
EM2502973-004	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	27	26	4.6	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 (%)*
EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QC Lot: 6406124)									
EM2502973-001	Anonymous	EP026SP: Chemical Oxygen Demand	----	10 (20)*	mg/L	68	68	0.0	No Limit
EM2503057-005	Anonymous	EP026SP: Chemical Oxygen Demand	----	10	mg/L	12	12	0.0	No Limit
EP045: Volatile Acids as CH3COOH (QC Lot: 6407876)									
EM2502820-001	Anonymous	EP045: Volatile Acids as Acetic Acid	----	5	mg/L	146	140	3.9	0% - 20%
EM2503185-001	Anonymous	EP045: Volatile Acids as Acetic Acid	----	5	mg/L	19	20	9.2	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: 6401324)								
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	99.2	98.8	101
				----	7 pH Unit	99.8	99.3	101
EA010P: Conductivity by PC Titrator (QCLot: 6401322)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	1412 µS/cm	96.3	85.0	119
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 6409014)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	93.0	91.0	110
				<10	2340 mg/L	107	80.8	119
				<10	293 mg/L	106	91.0	110
ED037P: Alkalinity by PC Titrator (QCLot: 6401321)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	102	85.0	116
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6400662)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	500 mg/L	105	90.0	110
				<1	25 mg/L	105	90.0	110
ED045G: Chloride by Discrete Analyser (QCLot: 6400663)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	104	90.0	110
				<1	10 mg/L	100	90.0	110
ED093F: Dissolved Major Cations (QCLot: 6406615)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	110	80.0	120
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	102	80.0	120
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	100	80.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	95.6	80.0	120
EG020F: Dissolved Metals by ICP-MS (QCLot: 6406613)								
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	96.2	83.2	109
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	106	86.3	112
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	108	91.8	112
EK055G: Ammonia as N by Discrete Analyser (QCLot: 6401423)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	102	90.0	110
EK057G: Nitrite as N by Discrete Analyser (QCLot: 6400660)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	100	90.0	110
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6401424)								

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
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6401424) - continued								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	108	90.0	110
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 6406067)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	5 mg/L	102	70.0	117
EP005: Total Organic Carbon (TOC) (QCLot: 6412481)								
EP005: Total Organic Carbon	----	1	mg/L	<1	100 mg/L	85.3	81.2	110
EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QCLot: 6406124)								
EP026SP: Chemical Oxygen Demand	----	10	mg/L	<10	500 mg/L	102	89.7	111
EP045: Volatile Acids as CH3COOH (QCLot: 6407876)								
EP045: Volatile Acids as Acetic Acid	----	5	mg/L	<5	198 mg/L	93.3	85.5	116

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: 6400662)							
EM2502977-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	108	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6400663)							
EM2502977-002	Anonymous	ED045G: Chloride	16887-00-6	400 mg/L	109	70.0	142
EG020F: Dissolved Metals by ICP-MS (QCLot: 6406613)							
EM2502728-001	Anonymous	EG020A-F: Chromium	7440-47-3	0.2 mg/L	95.8	71.0	135
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	104	75.0	131
EK055G: Ammonia as N by Discrete Analyser (QCLot: 6401423)							
EM2502754-001	Anonymous	EK055G: Ammonia as N	7664-41-7	50 mg/L	95.8	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 6400660)							
EM2502977-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	90.2	80.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6401424)							
EM2502754-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	77.2	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 6406067)							
EM2502754-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	# Not Determined	70.0	130
EP005: Total Organic Carbon (TOC) (QCLot: 6412481)							
EM2502771-004	Anonymous	EP005: Total Organic Carbon	----	100 mg/L	79.1	76.6	125

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QCLot: 6406124)							
EM2502973-002	Anonymous	EP026SP: Chemical Oxygen Demand	----	500 mg/L	96.6	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2503062**	Page	: 1 of 7
Client	: **VENTIA UTILITY SERVICES PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR TARIN CUMMINGS	Telephone	: +6138549 9609
Project	: Daylesford Landfill COC 1 of 1	Date Samples Received	: 25-Feb-2025
Site	: LANDFILL	Issue Date	: 04-Mar-2025
Sampler	: ----	No. of samples received	: 1
Order number	: 4701075273	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.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser	EM2502754--002	Anonymous	**Total Kjeldahl Nitrogen as N**	----	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: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural Daylesford SPLIT	----	----	----	27-Feb-2025	24-Feb-2025	**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: **WATER**

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
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P) Daylesford SPLIT	**24-Feb-2025**	**----**	----	**----**	**27-Feb-2025**	24-Feb-2025	×
EA010P: Conductivity by PC Titrator							
Clear Plastic Bottle - Natural (EA010-P) Daylesford SPLIT	**24-Feb-2025**	**----**	----	**----**	**27-Feb-2025**	24-Mar-2025	✓
EA015: Total Dissolved Solids dried at 180 ± 5 °C							
Clear Plastic Bottle - Natural (EA015H) Daylesford SPLIT	**24-Feb-2025**	**----**	----	**----**	**28-Feb-2025**	03-Mar-2025	✓
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P) Daylesford SPLIT	**24-Feb-2025**	**----**	----	**----**	**27-Feb-2025**	10-Mar-2025	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural (ED041G) Daylesford SPLIT	**24-Feb-2025**	**----**	----	**----**	**26-Feb-2025**	24-Mar-2025	✓

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
ED045G: Chloride by Discrete Analyser							
Clear Plastic Bottle - Natural (ED045G) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**26-Feb-2025**	24-Mar-2025	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**27-Feb-2025**	24-Mar-2025	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**27-Feb-2025**	23-Aug-2025	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**27-Feb-2025**	24-Mar-2025	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**25-Feb-2025**	26-Feb-2025	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**27-Feb-2025**	24-Mar-2025	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G) Daylesford SPLIT	**24-Feb-2025**	**28-Feb-2025**	24-Mar-2025	✓	**28-Feb-2025**	24-Mar-2025	✓
EP005: Total Organic Carbon (TOC)							
Amber TOC Vial - Sulfuric Acid (EP005) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**03-Mar-2025**	24-Mar-2025	✓
EP026SP: Chemical Oxygen Demand (Spectrophotometric)							
Clear Plastic Bottle - Sulfuric Acid (EP026SP) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**27-Feb-2025**	24-Mar-2025	✓
EP045: Volatile Acids as CH3COOH							
Clear Plastic Bottle - Natural (EP045) Daylesford SPLIT	**24-Feb-2025**	**----**	----	----	**28-Feb-2025**	10-Mar-2025	✓

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	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	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	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	**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	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Acids as CH3COOH	EP045	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	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	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	3	40	**7.50**	**7.50**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Acids as CH3COOH	EP045	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
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	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	**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	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Acids as CH3COOH	EP045	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	18	**5.56**	**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	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	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)
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.
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
Field Tests (performed by external sampler)	* EN67-B02	WATER	Field determinations as per methods described in APHA or supplied by client. The analysis is performed in the field by non-ALS samplers. ALS NATA accreditation does not apply for this service.
Total Organic Carbon	EP005	WATER	In house: Referenced to APHA 5310 B, The automated TOC analyzer determines Total and Inorganic Carbon by IR cell. TOC is calculated as the difference. This method is compliant with NEPM Schedule B(3)
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	WATER	In house: Referenced to APHA 5220 D. Samples are digested with a known excess of an acidic potassium dichromate solution using silver sulfate as a catalyst. The chromium is reduced from the Cr (VI) oxidation state to the Cr (III) state by the oxygen present in the organic material. Both of these chromium species are coloured and absorb in the visible region of (400nm & 600nm) the spectrum. The oxidisable organic matter can be calculated in terms of oxygen equivalents.
Volatile Acids as CH3COOH	EP045	WATER	In house: Referenced to APHA 5560 C. Steam distillable acids are captured in caustic solution and determined titremetrically. 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)

APPENDIX F - ALL HISTORICAL RECORDS

Hepburn
SHIRE COUNCIL

Daylesford Landfill Sampling

ventia

Project	Daylesford Landfill	Client	Hepburn Shire
Site	BH1	Description	FIELD READINGS
Bore Depth to TOC (m)	26.90		
AHD of top of Casing	NA		

Date	Time (est)	Pre-Purged WL (m from TOC)	Post-Purged WL (m from TOC)	Pump Method	Volume Pumped (litres)	pH	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Temp (C)	Redox (mV)	Sample Taken (Y/N)	comments	Meter Serial No
29/10/2003	12:45	18.70		3 VOL	53	NA	NA	NA	NA	NA	Y		
25/02/2004	10:52	18.95		Low Flow		NA	NA	NA	NA	NA	Y		
23/06/2004	13:12	18.90		Low Flow		5.61	2650	NA	13.1	14	Y		
25/10/2004	12:54	18.61		Low Flow		5.79	1960		19.2		Y		
24/01/2005	14:00	18.56		BAILED		5.90	2220		19.6		Y		
15/04/2005	8:35	18.90		3 VOL	52	5.49	2230	3.90	15.1	18	Y		
1/08/2005	14:00	19.35		Low Flow		5.48	2280	4.50	15.1	-77	Y		
26/10/2005	12:10	19.99		3 VOL	44	5.60	2180	4.40	15.1	-180	Y		
30/01/2006	14:45	18.93		Low Flow		5.88	2190				Y		
27/04/2006	11:23	20.69		3 VOL	42	5.82	2280	0.19	15.4	-33	Y		
27/07/2006	12:25	20.02		3 VOL	44	5.80	2230	0.00	15.4	-28	Y	Ran dry/Recharged throughout pumping	
24/09/2006	11:01	20.61		3 VOL	43	5.72	2140	3.06	15.6	-50	Y		
23/01/2007	13:19	20.23		3 VOL	44	5.50	2430	0.00	15.8	-57	Y		
18/04/2007	13:17	20.80		3 VOL	39	6.10	2095	0.00	15.9	-339	Y		
23/07/2007	15:10	21.89		3 VOL	33	5.68	1821	0.00	10.5	-396	Y		
23/10/2007	12:50	21.65		3 VOL	33	5.71	1890	0.00	15.5	-60	Y		W101047
23/01/2008	13:23	21.95		3 VOL	34	5.80	1880	0.00	17.9	-83	Y		W1674089
21/04/2008	13:38	22.38		3 VOL	32	5.90	1815	0.00	18.0	-348	Y		W101047
21/07/2008	12:40	22.79		BAILED		6.02	1710	2.93	13.0	-37	Y		W101047
20/10/2008	14:00	22.59		BAILED		5.53	2050	0.55	17.4	-107	Y		W101047
29/01/2009	8:30	22.79		BAILED		6.30	1728	0.05	17.9	-177	Y		W1674089
21/04/2009	12:50	22.98		BAILED		5.60	2005	2.30	15.6	-146	Y		W1674089
27/07/2009	14:20	23.48		BAILED		5.60	2033	1.10	10.2	-359	Y		W1674089
28/10/2009	12:00	22.94		BAILED		5.60	1614	2.90	16.7	-381	Y		W1674089
25/01/2010											NOT SAMPLED	Tubing stuck down bore could not retrieve	
1/04/2010											NOT SAMPLED		
22/07/2010	14:00	23.73		BAILED		6.10	1940	0.90	11.4	-416	Y	Tubing retrieved	W1674089
3/11/2010	11:15	20.21		BAILED		6.10	1960	2.20	15.1	NA	Y		W1674089
19/01/2011	10:30	18.59		BAILED		6.70	1560	1.90	16.2	-216	Y		W492
18/04/2011	12:15	18.55		BAILED		6.70	1650	1.80	16.5	-153	Y		W492
28/07/2011	14:00	18.44		BAILED		5.90	2542	3.90	14.2	114	Y		W492
17/10/2011	8:40	17.98		BAILED		6.10	2555	3.80	14.8	198	Y		W492
18/01/2012	10:15	18.10		BAILED		5.80	1870	3.10	15.9	197	Y		W492
23/04/2012	11:45	18.54		BAILED		6.00	1773	2.40	14.3	197	Y		W492
9/08/2012	10:50	18.14		BAILED		5.90	2130	1.00	13.4	146	Y		W492
29/11/2012	9:50	17.35		BAILED		6.00	2145	1.60	16.4	-20	Y		W492
26/02/2013	11:05	18.10		BAILED		5.70	1943	1.50	15.9	-65	Y		W492
15/05/2013	11:35	18.72		BAILED		5.80	1839	2.20	14.1	173	Y		W492
27/08/2013	11:30	18.20		BAILED		5.60	2055	2.60	15.0	55	Y		W492
25/11/2013	11:10	17.47		BAILED		5.80	1840	1.20	15.5	-295	Y	Sulphur smell	W492
26/02/2014	10:40	18.04		3 VOL	45	5.80	2001	0.10	16.1	19	Y		W492
27/05/2014	10:40	18.54		BAILED		5.80	1872	1.40	14.7	56	Y		W492
25/08/2014	12:25	17.91	17.68	Low Flow	10.4	6.03	1991	0.30	14.2	26	Y		W492
25/11/2014	11:05	17.89	17.91	Low Flow	5.7	6.10	1995	2.35	15.1	174	Y	Grey, moderate turbidity, no odour.	W492
24/02/2015	11:20	18.51	18.57	Low Flow	5.7	5.80	1829	1.40	15.6	189	Y	Started grey and ran clear at 3rd measurment	W492
25/08/2015	10:51	19.72	19.99	Low Flow	5.3	5.80	2261	0.26	13.9	220	Y	Clear, no odour.	W395398
22/02/2016	10:40	20.37	20.51	Low Flow	4.5	5.50	2270	0.48	16.4	178	Y	Clear, no odour.	W492
17/01/2017	7:20	16.87	16.98	Low Flow	5.0	5.60	1828	1.20	16.3	223	Y	Clear, no odour.	06G1861
22/03/2017	8:40	17.43	18.24	Low Flow	10.0	5.70	1851	1.60	16.5	198	Y	Clear, no odour.	W10110383
30/08/2017	9:35	17.97	18.45	Low Flow	8.2	5.90	2000	0.60	13.6	246	Y	Clear, no odour.	06G1861 AM
22/02/2018	9:10	18.17	18.42	Low Flow	5.2	5.60	1772	0.30	16.6	77	Y	Clear, no odour.	06G1861 AM
31/07/2018	9:00	19.26	19.66	Low Flow	8.0	7.10	1979	0.70	11.3	-121	Y	Clear, no odour.	06G1861 AM
27/02/2019	14:00	19.43	19.98	Low Flow	5.6	5.48	1991	0.30	20.1	28	Y	Slight grey turbidity nil odour	09L100298
21/08/2019	13:32	18.98	19.01	Low Flow	4.3	5.62	2159	0.30	14.0	70	Y	Turbid cloudy white grey	09L100298
13/02/2020	15:00	18.91	19.3	Low Flow	6.9	5.52	2026	0.44	16.6	62	Y	Slight grey turbidity slight odour	09L100298
21/08/2020	10:30	19.42	19.48	Low Flow	5.3	5.62	2077	0.50	12.8	28	Y	Slight grey turbid slight odour	09L100298
25/02/2021	11:35	18.38	18.57	Low Flow	8.6	5.48	1954	0.51	16.2	73	Y	Clear, no odour.	09L100298
16/09/2021	14:08	17.20	17.46	Low Flow	3.3	5.68	2127	0.21	15.1	64	Y	Clear, nil odour.	09L100298
4/03/2022	8:25	17.20	17.53	Low Flow	3.6	5.50	2061	0.21	16.6	43	Y	Clear, nil odour.	09L100298
30/08/2022	13:11	16.64	16.86	Low Flow	3.7	5.69	2016	0.31	12.4	49	Y	Slight light grey turbidity nil odour	09L100298
16/02/2023	9:02	14.15	14.34	Low Flow	3.3	5.72	2189	0.34	15.2	77	Y	Slight light grey turbidity nil odour	050710
28/02/2025	9:46	18.27	18.45	Low Flow	2.5	5.37	1908	0.32	15.5	-17	Y	Clear, no odour.	12J101715

Project	Daylesford Landfill	Client	Hepburn Shire
Site	BH2	Description	FIELD READINGS
Bore Depth to TOC (m)	20.75		
AHD of top of Casing	NA		

Date	Time (est)	Pre-Purged WL (m from TOC)	Post-Purged WL (m from TOC)	Pump Method	Volume Pumped (litres)	pH	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Temp (C)	Redox (mV)	Sample Taken (Y/N)	comments	Meter Serial No
29/10/2003	11:10	8.83		3 VOL	72	NA	NA	NA	NA	NA	Y		
25/02/2004	12:40	9.45		Low Flow		NA	NA	NA	NA	NA	Y		
23/06/2004	15:00	10.00		3 VOL	68	6.12	3730	0.22	13.7	-20	Y		
25/10/2004	13:26	8.66		Low Flow		6.03	2940	0.39	14.6	6	Y		
24/01/2005	12:45	9.04		BAILED		6.00	3110		15.1		Y		
15/04/2005	10:22	9.27		3 VOL	71	6.03	3210	3.82	14.4	-217	Y		
1/08/2005	14:25	9.95		Low Flow		6.07	3300	4.00	14.5	-163	Y		
26/10/2005	13:30	8.67		3 VOL	79	6.00	3310	5.20	14.6	-254	Y		
30/01/2006	12:15	9.53		Low Flow		6.25	3480		15.0		Y	Grey and cloudy water	
27/04/2006	12:07	10.14		3 VOL	70	6.17	3410	0.00	14.5	-188	Y	Grey and cloudy water	
27/07/2006	10:10	10.82		3 VOL	65	6.15	3110	0.00	14.5	-68	Y	Grey and cloudy water	
25/10/2006	9:35	11.22		3 VOL	57	6.15	3080	0.00	14.7	-101	Y	Grey and cloudy water	
23/01/2007	11:52	11.51		3 VOL	57	6.17	3590	0.00	14.9	-111	Y	Grey and cloudy water	
18/04/2007	11:37	12.12		3 VOL	54	6.55	2932	0.00	15.3	-98	Y	Grey and cloudy water	
23/07/2007	14:00	12.43		3 VOL	54	6.04	2631	0.00	14.3	-392	Y	Grey and cloudy water	
22/10/2007	11:45	11.97		3 VOL	55	6.12	3350	0.00	14.7	-76	Y	Grey and cloudy water	W101047
23/01/2008	13:55	12.40		3 VOL	51	6.19	4360	0.00	14.8	-84	Y	Grey and cloudy water	W1674089
21/04/2008	12:21	12.89		3 VOL	50	6.15	2451	0.00	15.3	-440	Y	Grey and cloudy water	W101047
21/07/2008	11:58	13.29		3 VOL	51	6.19	3200	1.45	14.6	-26	Y	Grey and cloudy water	W101047
20/10/2008	12:20	12.56		3 VOL	55	6.13	3790	0.00	14.8	-94	Y	Grey and cloudy water	W101047
29/01/2009	7:45	13.14		3 VOL	51	6.30	2999	0.00	14.9	-234	Y	Grey and cloudy water	W1674089
21/04/2009	12:27	13.55		3 VOL	50	5.90	3254	0.50	15.2	-205	Y	Grey and cloudy water	W1674089
27/07/2009	13:25	13.95		3 VOL	48	5.80	2957	0.57	14.6	-421	Y	Sulphur smell, cloudy water	W1674089
28/10/2009	11:30	13.81		3 VOL	60	5.90	2495	0.15	14.9	-487	Y	Ants nest in bore, Large amount of ants, living and dead in water, very putrid smell coming from bore and water.	W1674089
25/01/2010	10:45	12.88		3 VOL	62	6.40	3353	0.20	15.7	1	Y	Putrid smell	W492
1/04/2010											NOT SAMPLED		
20/07/2010	13:15	13.18		3 VOL	59	6.50	3300	0.10	15.0	-401	Y		W1674089
3/11/2010	10:30	9.98		3 VOL	75	6.40	3213	1.50	14.8	350	Y		W1674089
19/01/2011	11:15	8.62		3 VOL	88	7.30	2536	2.20	15.6	-240	Y		W492
18/04/2011	13:25	8.65		3 VOL	92	6.80	2740	0.00	14.7	-156	Y		W492
28/07/2011	13:00	8.39		3 VOL	78	6.10	3052	0.40	14.5	118	Y	Grey and cloudy water	W492
17/10/2011	9:10	7.79		3 VOL	82	6.20	3140	0.50	14.6	201	Y		W492
18/01/2012	10:35	8.21		3 VOL	87	6.20	3120	0.20	15.0	180	Y		W492
23/04/2012	12:15	8.58		3 VOL	83	6.30	2655	0.20	14.5	183	Y		W492
9/08/2012	11:15	7.80		3 VOL	88	6.00	3110	0.30	13.1	189	Y		W492
29/11/2012	11:15	7.25		3 VOL	91	6.30	3210	0.90	14.7	-47	Y		W492
26/02/2013	9:40	8.44		3 VOL	88	6.20	3327	0.40	14.8	-189	Y		W492
15/05/2013	10:15	9.15		3 VOL	79	6.80	3149	4.30	13.4	157	Y		W492
27/08/2013	10:20	8.33		BAILED		6.60	3118	3.10	14.5	-45	Y	Pump failed while sampling.	W492
25/11/2013	12:24	7.47		3 VOL	86	6.70	2812	0.82	14.8	-125	Y	Sulphur smell, cloudy water	W492
26/02/2014	9:25	9.28		3 VOL	77	6.20	3154	0.60	14.6	53	Y	Sulphur smell, clear water	W492
27/05/2014	12:05	9.37		3 VOL	80	6.30	3085	1.60	14.4	35	Y		W492
25/08/2014	15:05	7.13	7.24	Low Flow	4.0	6.64	2199	0.60	14.0	-15	Y		W492
25/11/2014	9:50	7.96	7.97	Low Flow	5.8	6.45	3020	1.04	13.9	125	Y	Grey, moderate turbidity, no odour	W492
24/02/2015	9:50	8.65	8.69	Low Flow	5.8	7.10	2450	1.30	14.0	169	Y	Brown. Mod turb, no odour. Lab results of pH 7.4 show rise in ph seen in field, lab results of EC also justify field readings.	
25/08/2015	12:40	9.79	9.93	Low Flow	5.0	6.30	3288	0.20	13.5	159	Y	Clear, no odour	W395398
22/02/2016	12:40	10.60	10.65	Low Flow	5.0	6.80	2700	0.44	15.1	112	Y	Clear, no odour	W492
17/01/2017	8:05	7.23	8.05	Low Flow	8.0	6.40	3010	0.40	17.0	59	Y	Milky colour, very rancid odour due to ants nest/dead ants in bore	W10110383
22/03/2017	7:25	8.11	8.45	Low Flow	5.6	6.40	3010	1.00	14.7	95	Y	Grey, low turbidity. Dead ants in bore. Split dup taken	06G1861 AM
30/08/2017	10:40	7.82	7.99	Low Flow	3.5	6.70	2910	0.80	13.3	-19	Y	Grey, low turbidity, no odour.	06G1861 AM
22/02/2018	10:30	8.40	8.61	Low Flow	4.2	6.70	1981	1.10	15.4	-299	Y	Black, low turbidity, sulpher smell.	06G1861 AM
31/07/2018	10:30	9.15	9.35	Low Flow	6.0	6.40	2980	0.50	13.2	-238	Y	Black, low turbidity, sulpher smell.	06G1861 AM
27/02/2019	10:47	9.49	9.85	Low Flow	4.1	6.22	2997	0.25	16.3	-85	Y	Black colour reductive smell	09L100298
22/08/2019	13:40	8.95	9	Low Flow	9.0	6.13	2184	0.18	13.1	7	Y	Slight dark colour, no odour	09L100298
12/02/2020	11:05	8.93	9.39	Low Flow	7.4	6.12	2830	0.46	15.6	45	Y	Grey colour very slight reductive smell	09L100298
20/08/2020	13:18	9.31	9.39	Low Flow	5.8	6.13	2883	0.33	12.9	24	Y	Grey colour very slight reductive smell	09L100298
24/02/2021	13:50	8.35	8.75	Low Flow	7.8	5.90	2856	0.33	15.3	39	Y	Dark grey turbidity	09L100298
16/09/2021	11:46	6.88	7.01	Low Flow	1.6	6.20	2898	0.37	14.9	37	Y	Grey slight odour	09L100298
2/03/2022	9:10	7.57	7.94	Low Flow	2.9	6.23	3072	0.19	15.5	-12	Y	Slight grey colour nil odour	09L100298
30/08/2022	10:51	6.37	6.79	Low Flow	2.4	6.30	2079	0.22	12.2	4	Y	Slight grey colour nil odour	09L100298
15/02/2023	10:46	4.89	5.21	Low Flow	7.8	6.30	3245	0.24	14.3	58	Y	Slight grey colour nil odour	050710
24/02/2025	11:55	8.42	8.55	Low flow	1.9	6.12	2896	0.13	14.6	-4	Y	Clear, no odour	12J101715

Project	Daylesford Landfill	Client	Hepburn Shire
Site	BH3	Description	FIELD READINGS
Bore Depth to TOC (m)	18.33		
AHD of top of Casing	NA		

Date	Time (est)	Pre-Purged WL (m from TOC)	Post-Purged WL (m from TOC)	Pump Method	Volume Pumped (litres)	pH	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Temp (C)	Redox (mV)	Sample Taken (Y/N)	comments	Meter Serial No
29/10/2003	11:30	4.53		3 VOL	88	NA	NA	NA	NA	NA	Y		
25/02/2004	11:54	4.92		Low Flow		NA	NA	NA	NA	NA	Y		
23/06/2004	13:47	5.77		3 VOL	80	6.04	3900	0.00	13.4	-31	Y		
25/10/2004	13:50	4.14		Low Flow		5.94	3220	0.45	13.6	-11	Y		
24/01/2005	11:50	4.63		BAILED		6.30	3550		12.6		Y		
15/04/2005	10:00	4.49		3 VOL	100	5.92	3710	3.99	13.4	-58	Y		
1/08/2005	15:10	4.86		Low Flow		5.84	3980		13.6	-57	Y		
26/10/2005	12:42	4.25		3 VOL	100	5.90	3740	4.40	13.7	-199	Y		
30/01/2006	13:40	4.38		Low Flow		6.23	3690		14.5		Y	Black and oily looking	
27/04/2006	12:57	5.15		3 VOL	90	6.01	3970	0.00	13.6	-145	Y	sulphur smell with oily appearance, described as white creamy lines	
27/07/2006	10:42	5.42		3 VOL	85	6.05	3670	0.00	13.7	-77	Y	Creamy appearance	
25/10/2006	10:10	5.62		3 VOL	87	6.04	3550	0.00	13.7	-90	Y	Grey colour sulphur smell	
23/01/2007	12:36	6.27		3 VOL	80	5.92	4140	0.00	13.8	-134	Y		
18/04/2007	12:17			3 VOL	70	6.52	3141	0.00	14.2	-457	Y	Time value written in instead of water level. Water has sulphur smell, green/grey in colour and oily.	
23/07/2007	14:40	7.39		3 VOL	75	5.89	2778	0.00	13.0	-441	Y	Water has sulphur smell, green/grey in colour and oily appearance.	
23/10/2007	12:11	7.01		3 VOL	82	6.09	3460	0.00	13.8	-109	Y	Water has sulphur smell, green/grey in colour and oily appearance.	W101047
23/01/2008	12:24	7.40		3 VOL	70	6.15	3480	0.00	14.0	-164	Y	Water has sulphur smell, green/grey in colour and oily appearance.	W1674089
21/04/2008	11:22	7.96		3 VOL	70	5.84	2450	0.00	14.1	-451	Y	sulphur smell	W101047
21/07/2008	11:08	8.40		3 VOL	75	6.14	3480	1.16	13.7	-127	Y	sulphur smell	W101047
20/10/2008	11:31	8.10		3 VOL	75	5.76	3820	0.00	14.0	-127	Y	sulphur smell	W101047
29/01/2009	7:10	8.30		3 VOL	68	6.30	3033	0.00	13.8	-357	Y	sulphur smell	W1674089
21/04/2009	11:50	8.79		3 VOL	70	5.80	3430	2.00	13.7	-222	Y	sulphur smell	W1674089
28/07/2009	12:50	9.10		3 VOL	60	5.90	3307	0.00	13.7	-437	Y	very strong sulphur smell	W1674089
28/10/2009	12:50	8.51		3 VOL	70	5.80	2755	0.10	13.9	-440	Y	Cloudy, slight sulphur smell	W1674089
25/01/2010	11:15	8.26		3 VOL	75	6.30	3071	0.10	14.1	110	Y		W492
1/04/2010											NOT SAMPLED		
21/07/2010	12:15	8.41		3 VOL	65	6.30	3470	0.10	13.8	-359	Y		W1674089
3/11/2010	9:35	5.85		3 VOL	85	6.00	3471	2.60	13.9	275	Y		W1674089
19/01/2011	11:45	4.55		BAILED		7.80	2760	2.20	14.3	-267	Y	pH not following trend, possibly due to being bailed, lab results of 6.7 follow this trend better.	W492
18/04/2011	14:24	4.16		3 VOL	95	6.50	3015	0.0	13.8	-164	Y		W492
28/07/2011	11:45	3.93		3 VOL	100	5.90	3340	0.2	13.5	158	Y		W492
17/10/2011	9:35	3.66		3 VOL	105	6.10	3480	0.7	13.5	203	Y		W492
18/01/2012	10:55	3.93		3 VOL	105	6.20	3480	0.4	13.9	181	Y		W492
23/04/2012	12:45	4.31		3 VOL	105	6.20	2945	0.4	13.7	167	Y		W492
9/08/2012	12:10	3.85		3 VOL	105	6.40	3510	0.6	12.7	177	Y		W492
29/11/2012	11:35	3.11		3 VOL	102	6.10	3380	0.7	13.9	-54	Y		W492
26/02/2013	10:34	4.22		3 VOL	102	6.20	3416	0.4	13.9	-223	Y		W492
15/05/2013	10:41	4.93		3 VOL	105	6.80	3459	2.4	12.8	104	Y		W492
27/08/2013	10:45	4.41		3 VOL	110	6.50	3409	0.4	13.6	-33	Y	sulphur smell	W492
25/11/2013	13:04	3.32		3 VOL	110	6.50	3041	1.9	15.5	-86	Y	sulphur smell	W492
26/02/2014	9:55	3.62		3 VOL	112	6.10	3481	0.0	13.8	37	Y	sulphur smell	W492
27/05/2014	11:00	4.57		3 VOL	115	6.10	3366	0.0	13.7	1	Y	sulphur smell	W492
25/08/2014	13:50	3.73	2.89	Low Flow	7.7	6.63	3113	0.1	13.3	-95	Y		W492
25/11/2014	9:00	3.66	3.67	Low Flow	6.3	6.30	3380	0.10	12.5	127	Y	Clear, no odour.	W492
24/02/2015	9:00	4.56	4.67	Low Flow	6.3	6.20	3480	0.30	14.3	138	Y	Clear, no odour.	W492
25/08/2015	14:30	5.48	5.52	Low Flow	4.0	6.00	3654	0.20	12.3	165	Y	Clear, no odour.	W395398
22/02/2016	14:15	6.49	6.59	Low Flow	4.5	6.20	3420	0.64	14.4	152	Y	Light brown colour, low turb, no odour	W492
17/01/2017	9:30	3.12	3.12	Low Flow	4.8	6.70	2851	0.70	16.7	247	Y	Light brown colour, low turb, no odour. SPLIT DUPLICATE TAKEN	06G1861
22/03/2017	8:50	4.11	4.26	Low Flow	5.3	6.00	3140	0.90	14.7	184	Y	Clear	06G1861
30/08/2017	12:05	3.93	3.94	Low Flow	4.0	6.90	2870	1.10	11.3	155	Y	Clear, no odour.	06G1861 AM
22/02/2018	11:35	4.59	4.66	Low Flow	3.3	6.00	3370	0.90	15.2	-43	Y	Light brown, mod turb, no odour.	06G1861 AM
31/07/2018	11:40	5.26	5.3	Low Flow	7.0	7.00	3340	0.65	12.0	-121	Y	Light brown, mod turb, no odour.	06G1861 AM
27/02/2019	12:05	5.60	5.67	Low Flow	4.7	5.97	3325	0.28	16.1	-25	Y	Slight grey turbidity slight septic odour	09L100298
22/08/2019	13:30	4.99	5.01	Low Flow	4.2	6.00	3333	0.21	11.3	7	Y	Moderate turbidity, light gray, no odour	09L100298
12/02/2020	12:12	5.16	5.25	Low Flow	5.2	5.95	3342	0.35	15.1	44	Y	Slight grey turbidty nil odour	09L100298
20/08/2020	14:35	5.08	5.09	Low Flow	3.9	6.06	3339	0.35	12.1	-13	Y	grey turbidity nil odour	09L100298
25/02/2021	9:30	4.60	4.66	Low Flow	7.8	5.85	3335	0.30	13.2	48	Y	Slight grey turbidty nil odour	09L100298
16/09/2021	12:30	3.33	3.39	Low Flow	3.1	6.04	3498	0.26	12.1	47	Y	Slight grey turbidty nil odour	09L100298
2/03/2022	9:55	3.78	3.83	Low Flow	2.6	6.09	3535	0.17	15.1	-19		Clear, nil odour.	09L100298
30/08/2022	11:55	3.10	3.12	Low Flow	3.3	6.16	3350	0.38	11.1	0	Y	Slight grey turbidity nil odour	09L100298
15/02/2023	11:55	1.41	3.12	Low Flow	3.3	6.16	3069	0.34	14.0	95	Y	Slight grey turbidity nil odour	050710
24/02/2025	10:02	4.83	4.85	Low Flow	1.5	5.94	3585	0.27	13.5	-8	Y	Clear, nil odour.	12J101715

Project	Daylesford Landfill	Client	Hepburn Shire
Site	BH4	Description	FIELD READINGS
Bore Depth to TOC (m)	39.10		
AHD of top of Casing	NA		

Date	Time (est)	Pre-Purged WL (m from TOC)	Post-Purged WL (m from TOC)	Pump Method	Volume Pumped (litres)	pH	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Temp (C)	Redox (mV)	Sample Taken (Y/N)	comments	Meter Serial No
29/10/2003	12:10	27.30		Low Flow		NA	NA	NA	NA	NA	Y		
25/02/2004	9:50	27.70		Low Flow		NA	NA	NA	NA	NA	Y		
23/06/2004	12:20	28.65		Low Flow		5.46	3250	1.26	13.6	16	Y		
25/10/2004	11:15	27.68		Low Flow		6.36	2320	9.84	15.3	-46	Y		
24/01/2005	9:30	27.24		BAILED		5.55	2750		13.3		Y		
15/04/2005	12:10	27.45		Low Flow		5.51	2690	7.40	17.7	-14	Y		
1/08/2005	13:05	28.10		Low Flow		5.36	2970	9.24	14.2	9	Y		
26/10/2005	11:27	27.55		Low Flow		5.50	2810	6.80	12.7	6	Y		
30/01/2006	10:50	27.53		Low Flow		5.56	2000		25.3		Y	cloudy appearance	
27/04/2006	10:00	28.28		Low Flow		5.62	3080	0.23	13.2	44	Y	grey cloudy appearance	
27/07/2006	8:55	28.98		Low Flow		5.53	3080	0.00	12.4	30	Y	grey cloudy appearance	
25/10/2006	8:50	29.25		Low Flow		5.50	2910	2.10	14.0	28	Y		
23/01/2007	10:30	29.63		Low Flow		5.30	3340	3.01	22.2	23	Y	cloudy appearance	
18/04/2007	10:50	30.19		Low Flow		5.80	2470	0.20	17.8	84	Y		
23/07/2007	12:15	30.53		Low Flow		6.77	2343	0.00	12.6	165	Y		
23/10/2007	10:50	30.31		Low Flow		5.48	2690	1.39	14.8	6	Y		W101047
23/01/2008	11:27	30.61		Low Flow		5.58	3240	7.52	15.8	-21	Y	grey cloudy appearance	W1674089
21/04/2008	10:32	30.61		Low Flow		5.50	2702	0.00	14.6	-377	Y	grey cloudy appearance	W101047
21/07/2008	10:28	31.53		Low Flow		6.60	2900	0.72	11.7	-90	Y		W101047
20/10/2008	11:45	31.16		Low Flow		5.20	3190	0.00	14.6	-5	Y		W101047
29/01/2009	8:45	31.55		Low Flow		5.60	2615	0.69	19.1	-12	Y		W1674089
21/04/2009	11:08	31.79		Low Flow		5.40	2968	0.95	16.4	-121	Y		W1674089
28/07/2009	11:50	32.22		Low Flow		5.30	2980	3.60	12.0	-66	Y		W1674089
28/10/2009	9:00	31.66		BAILED		5.50	2515	1.50	16.1	-64	Y		W1674089
25/01/2010	10:00	31.41		BAILED		5.60	2840	1.20	16.7	174	Y		W492
1/04/2010											NOT SAMPLED		
21/07/2010	11:00	31.54		Low Flow		6.50	1200	0.10	11.7	-90	Y	Unsure why EC so low, field results of 1000 and lab results show Ec of 1200. Approx 120mm rain fell in preceding month. Both low readings confirm a drop in EC for this sample round compared to the usual 2000-3500 range	W1674089
3/11/2010	9:00	28.86		BAILED		5.60	3007	2.60	13.2	681	Y		W1674089
19/01/2011	9:30	27.15		Low Flow		6.50	2550	1.10	15.4	-180	Y		W492
18/04/2011	11:48	26.97		Low Flow		6.60	2990	0.4	15.4	-144	Y		W492
28/07/2011	11:00	26.83		BAILED		5.70	3261	1.2	14.1	139	Y		W492
17/10/2011	8:15	26.31		BAILED		5.70	3780	2.3	14.5	275	Y		W492
18/01/2012	9:45	26.46		BAILED		5.70	3330	2.3	16.1	276	Y		W492
23/04/2012	11:15	27.03		BAILED		5.90	3106	2.1	14.1	295	Y		W492
9/08/2012	10:30	26.48		BAILED		5.40	3680	1.2	13.5	271	Y		W492
29/11/2012	9:30	25.60		BAILED		5.50	3560	1.7	16.6	42	Y		W492
26/02/2013	9:00	26.45		BAILED		5.60	3716	2.2	16.0	-49	Y		W492
15/05/2013	9:45	27.23		BAILED		5.70	3744	2.5	13.9	245	Y		W492
27/08/2013	9:45	26.86		BAILED		5.50	3737	3.0	14.7	115	Y	Sulpher Smell	W492
25/11/2013	10:00	25.76		BAILED		5.40	3374	1.4	15.5	50	Y	Sulpher Smell	W492
26/02/2014	8:50	26.59		BAILED		5.70	3836	2.1	15.0	163	Y	Sulpher Smell	W492
27/05/2014	10:10	27.02		BAILED		5.70	3828	1.1	14.6	37	Y	Sulpher Smell	W492
25/08/2014	10:15	26.70	25.90	Low Flow	7	6.60	4033	0.2	14.4	3	Y		W492
25/11/2014	13:15	26.21	26.27	Low Flow	8.2	5.75	4380	0.61	15.2	192	Y	Clear, no odour.	W492
24/02/2015	12:25	26.92	26.96	Low Flow	6.7	6.10	4090	1.10	15.3	174	Y	Clear, no odour.	W492
25/08/2015	8:10	28.23	28.42	Low Flow	7.3	5.50	4322	0.38	13.6	130	Y	Clear, no odour.	W395398
22/02/2016	8:40	29.01	29.15	Low Flow	5.5	5.50	4210	0.50	13.6	117	Y	Grey colour, low turbidity, no odour.	W492
17/01/2017	7:00	25.14	25.38	Low Flow	9.0	5.70	4060	0.70	17.3	139	Y	Grey milky colour, odourless.	W10110383
22/03/2017	7:30	25.93	26.22	Low Flow	13.0	5.60	4180	2.00	15.2	178	Y	Grey milky to clear by time sampled	W10110383
30/08/2017	8:10	26.45	26.74	Low Flow	8.3	5.80	3380	1.00	12.2	214	Y	Grey colour, low turbidity, no odour. SPLIT DUP TAKEN	06G1861 AM
22/2/218	7:45	26.56	26.81	Low Flow	7.3	6.60	4770	0.10	15.7	-121	Y	Grey colour, low turbidity, no odour. SPLIT DUP TAKEN	06G1861 AM
31/07/2018	7:55	27.76	28.1	Low Flow	8.0	6.80	4120	0.80	12.5	-125	Y	Grey, low turb, no odour. Split dup taken	06G1861 AM
27/02/2019	9:06	27.93	28.39	Low Flow	9.1	5.55	4033	0.33	15.3	15	Y	Grey, low turb, no odour. Split dup taken	09L100298
21/09/2019	11:52	27.51	27.54	Low Flow	9.6	5.62	3793	0.17	14.7	34	Y	Slightly cloudy, no odour	09L100298
12/02/2020	9:30	27.42	27.67	Low Flow	7.8	5.44	4017	0.48	16.3	62	Y	Slight grey turbidity	09L100298
20/08/2020	11:07	27.87	27.67	Low Flow	5.2	5.50	3889	0.43	12.0	44	Y	Slight grey turbidity	09L100298
24/02/2021	12:05	26.86	27.06	Low Flow	8.4	5.34	4202	0.41	15.6	65	Y	Grey, low turb, no odour.	09L100298
16/09/2021	9:16	25.69	25.87	Low Flow	5.5	5.66	4161	0.19	13.9	23	Y	Grey turbidity, no odour	09L100298
2/03/2022	7:45	25.69	25.91	Low Flow	4.6	5.62	4857	0.44	17.7	-9	Y	Clear, no odour.	09L100298
30/08/2022	8:40	25.28	25.39	Low Flow	5.1	5.61	4017	0.49	11.1	7	Y	Silver turbidity nil odour	09L100298
15/02/2023	8:55	22.37	22.43	Low Flow	5.1	5.59	4221	0.35	15.3	80	Y	Silver turbidity nil odour	050710
28/02/2025	10:53	26.75	26.85	Low Flow	2.9	5.34	4575	0.20	15.6	-21	Y	Clear, slight odour	12J101715

Project	Daylesford Landfill	Client	Hepburn Shire
Site	LEACHATE	Description	FIELD READINGS

*Note AHD level of bore casing =556.500

Date	Time (est)	Survey reading on bore casing	Survey Water level reading	Difference	Pool level M AHD (Casing AHD - Difference)	pH	EC	Do	Temp	Orp	Comments	Probe
29/10/2003	12:45				554.573						See lab results	
25/02/2004	12:20			2.350	554.150						See lab results	
22/06/2004	14:00			2.038	554.462						See lab results	
25/10/2004	14:00			1.465	555.035						See lab results	
24/01/2005	10:20			1.575	554.925						See lab results	
15/04/2005	9:10	0.795	2.369	1.574	554.926	8.82		10.50	15.5			
1/08/2005	15:30	0.075	1.840	1.765	554.735	8.33	783	11.33	10.1			
26/10/2005	13:00	0.84	1.856	1.116	555.384	8.70	664	5.90	17.3			
30/01/2006	13:15	0.28	1.410	1.130	555.370	8.95	599	6.70	26.1		Greenish tinge.	
27/04/2006	13:15	0.904	2.203	1.299	555.201	8.99	552	9.40	13.8		Greenish tinge.	
27/07/2006	12:00	0.54	1.535	0.995	555.505	8.28	451	8.25	8.6			
25//10/2006	10:30	0.896	1.940	1.044	555.456	8.94	438	6.10	17.8			
23/01/2007	9:00	0.674	3.271	2.597	553.903	9.51	481	4.58	25.8			
18/04/2007	12:00	0.536	3.918	3.384	553.116	9.95	541	6.31	17.7			
23/07/2007	14:30					8.14	331	9.48	10.0			
23/10/2007	12:30	0.712	3.075	2.363	554.137	7.93	397	1.83	19.3			W101047
23/01/2008	12:45					8.45	530	13.47	22.2			W1674089
21/04/2008	12:50	0.228	3.818	3.590	552.910	8.63	558	9.04	15.3			W101047
21/07/2008	11:20	0.364	2.748	2.384	554.116	7.62	438	9.76	7.2			W101047
20/10/2008	11:40	0.367	3.289	2.922	553.578	7.33	388	10.60	19.0			W101047
29/01/2009	7:20				553.473	9.37	504	9.42	24.7			W1674089
21/04/2009	12:00	0.675	3.943	3.268	553.232	8.88	747	4.00	16.2			W1674089
28/07/2009	13:00	0.764	3.036	2.272	554.228	8.30	443	10.70	7.5			W1674089
28/10/2009	11:00	0.591	3.091	2.500	554.000	7.80	497	10.20	18.1			W1674089
25/01/2010	11:20					8.10	740	7.60	25.1			W492
1/04/2010											NOT SAMPLED	
21/07/2010	11:30	0.697	2.443	1.746	554.754	7.90	440	11.40	8.9			W1674089
3/11/2010	9:50	0.758	1.618	0.860	555.640	8.50	662	7.80	15.4			W1674089
19/01/2011	11:20	1.013	1.884	0.871	555.629	8.40	690	8.10	19.8			W492
18/04/2011	14:40	1.010	1.880	0.870	555.630	7.90	990	6.00	17.9			W492
28/07/2011	12:15	0.287	1.277	0.990	555.510	7.60	940	7.20	7.3			W492
17/10/2011	950	0.909	2.722	1.813	554.687	8.70	850	12.90	16.0			W492
18/01/2012	11:30	0.869	2.668	1.799	554.701	8.10	911	12.00	26.7			W492
23/04/2012	13:00	0.964	2.652	1.688	554.812	8.70	705	10.10	15.3			W492
9/08/2012	11:40	0.927	2.576	1.649	554.851	8.00	664	9.30	8.2			W492
29/11/2012	11:55	0.929	2.155	1.226	555.274	9.20	747	11.20	28.1			W492
26/02/2013	10:00	0.552	2.680	2.128	554.372	8.80	942	7.90	23.4			W492
15/05/2013	11:10	0.570	3.283	2.713	553.787	8.50	1092	9.30	10.5			W492
27/08/2013	11:00	0.676	2.741	2.065	554.435	8.50	536	13.10	10.8			W492
25/11/2013	13:40	0.641	1.363	0.722	555.778	8.60	755	9.60	26.3			W492
26/02/2014	10:05	0.782	3.253	2.471	554.029	8.60	1025	8.70	21.3			W492
27/05/2014	11:10	0.736	3.075	2.339	554.161	8.70	864	8.50	12.8			W492
25/08/2014	14:15	0.911	2.059	1.148	555.352	11.00	590	12.90	13.3			W492
25/11/2014	8:30	0.877	2.145	1.268	555.232	9.00	695	10.10	18.0			W492
24/02/2015	8:30	0.711	4.124	3.413	553.087	8.40	1086	8.10	18.3		Dam observed to be very low.	W492
25/08/2015	14:00					8.50	770	13.40	11.9		Level not observed due to laser level used to obtain height not working	W395398
22/02/2016	12:35				550.007	8.70	1470	8.90	21.9		Dam very low.	W492
17/01/2017	10:40					8.10	1259	8.60	22.0	188.0		06G1861
22/03/2017	10:00					8.30	1790	5.60	20.4	184.0		06G1861
30/08/2017	13:15					7.80	860	9.30	9.4	24.0		06G1861 AM
22/02/2018	12:00					8.10	1132	5.50	21.1	-68.0	Water level very low	06G1861 AM
31/07/2018	8:10					7.90	757	11.50	7.9	36.0		06G1861 AM
27/02/2019	13:20					8.87	887	2.78	21.1	-35.1		09L100298
12/02/2020	13:02					7.68	816	17.56	28.0	37.7	Water level very low High oxygen levels.	09L100298
20/08/2020	15:09					7.75	497	10.43	10.8	-8.5	High oxygen conditions	09L100298
25/02/2021	11:05					7.86	538	9.26	19.8	9.9	High oxygen conditions	09L100298
16/09/2021	13:10					8.82	429	14.70	11.4	39.6	High oxygen conditions	09L100298
2/03/2022	10:45					7.39	765	0.03	20.5	-172.3	Low oxygen conditions	09L100298
30/08/2022	12:55					7.78	407.00	-	-	-	Low oxygen conditions	09L100298
15/02/2023	13:10					8.40	903	7.18	24.0	29.4	Low oxygen conditions	050710
1/08/2024	15:03					6.68	706	7.36	12.9	61.1		23G103456
24/02/2025	11:00					9.28	718	8.25	20.0	-14.7		12J101715