

Levin Landfill May 2021 Quarterly Groundwater, Surface Water and Leachate Monitoring Report

PREPARED FOR Horowhenua District Council | June 2021

We design with community in mind



Revision Schedule

Rev No.	Date	Description	Signature or Typed Name (documentation on file)			
			Prepared by	Checked by	Reviewed by	Approved by
0	10/06/2021	Draft for internal review	J. O'Brien	P. Landmark	P Heveldt	
1	14/06/21	Final	J. O'Brien	P. Landmark	P Heveldt	R. Hulme



Quality Statement

This document has been prepared for the benefit of Horowhenua District Council. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person.

This disclaimer shall apply notwithstanding that the report may be made available to Horowhenua District Council and other persons for an application for permission or approval to fulfil a legal requirement.

PROJECT MANAGER	PROJECT TECHNICAL LEAD
R. Hulme	P. Landmark

PREPARED BY

J. O'Brien & P. Landmark 03 / 06 / 2021

CHECKED BY

P. Landmark  04 / 06 / 2021

REVIEWED BY

P. Heveldt  11 / 06 / 2021

APPROVED FOR ISSUE BY

R. Hulme  14 / 06 / 2021

PALMERSTON NORTH

118 Fitzherbert Avenue, Palmerston North 4410
PO Box 13-052, Armagh, Christchurch 8141
TEL +64 6 357 4034

STATUS Final | **Project No** 310101088



**HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE
MONITORING REPORT**

Table of Contents

EXECUTIVE SUMMARY	I
1.0 INTRODUCTION.....	1
2.0 GROUNDWATER AND SURFACE WATER MONITORING.....	1
2.1 SAMPLE ANALYSIS	1
2.2 BACKGROUND GROUNDWATER QUALITY	2
2.3 GROUNDWATER QUALITY HYDRAULICALLY DOWN-GRADIENT OF THE NEW LANDFILL	4
2.3.1 Shallow Aquifer	4
2.3.2 Deep Gravel Aquifer.....	7
2.4 IMPACT OF OLD LANDFILL ON GROUNDWATER QUALITY	8
2.5 GROUNDWATER QUALITY DOWN-GRADIENT OF THE IRRIGATION AREA	11
2.6 LEACHATE EFFLUENT RESULTS.....	12
2.7 TATANA PROPERTY DRAIN.....	14
2.8 HOKIO STREAM.....	15
3.0 GAS DETECTION IN MONITORING WELLS	17
4.0 DISCUSSION	17
4.1 SAMPLING QUALITY CONTROL AND ASSURANCE	17
4.2 BACKGROUND GROUNDWATER QUALITY	18
4.3 SHALLOW AQUIFER GROUNDWATER QUALITY.....	18
4.3.1 Hydraulically Up-gradient from the Old Landfill.....	18
4.3.2 Irrigation Area	18
4.3.3 Hydraulically Down-gradient from the Old Landfill	19
4.4 DEEP AQUIFER GROUNDWATER QUALITY	19
4.5 LEACHATE EFFLUENT	19
4.6 TATANA PROPERTY DRAIN.....	19
4.7 HOKIO STREAM.....	19
4.8 CONSENT COMPLIANCE	20
5.0 CONCLUSIONS.....	20

LIST OF TABLES

Table 2-1: Comprehensive Parameters.....	2
Table 2-2: Background Monitoring Results for April 2021.....	3
Table 2-3: D-Series and E1S Monitoring Bore Results for April 2021.....	5
Table 2-4: VOCs detected in samples from the shallow aquifer bores during the April 2021 sampling round	6
Table 2-5: Results for Monitoring Bores within the Deep Aquifer for April 2021.....	7
Table 2-6: Monitoring Results for Shallow Boreholes Down-Gradient from the Old Landfill for April 2021	9
Table 2-7: VOCs detected in samples from down-gradient groundwater bores during the April 2021 sampling round	10
Table 2-8: Results from Monitoring Bores in the Irrigation Area for April 2021	11



**HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE
MONITORING REPORT**

Table 2-9: Results from Leachate Effluent Monitoring for February, March and April 2021	12
Table 2-10: VOCs detected in samples of leachate from the April 2021 sampling round	13
Table 2-11 Tatana Drain Monitoring Results for April 2021	14
Table 2-12: Hokio Stream Monitoring Results for February, March, and April 2021	16

LIST OF APPENDICES

- Appendix A** Site Plan
- Appendix B** Sampling Schedule
- Appendix C** Analytical Results
- Appendix D** Historical Result Graphs
- Appendix E** Gas Sampling Results at GW Bores



**HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE
MONITORING REPORT**

Executive Summary

Horowhenua District Council (HDC) is required to carry out quarterly compliance monitoring of groundwater and monthly sampling of most of the surface water locations at the Levin Landfill, as part of the conditions on Resource Consents DP6009, DP6010, DP6011 and DP102259. This report summarises the findings for the monitoring events of the period from February 2021 to April 2021, including results for:

- Background (natural) groundwater
- Landfill leachate
- Groundwater bores within the new landfill and old irrigation area
- Shallow aquifers, down-gradient of the old landfill
- The deep aquifer, and
- The Hokio Stream.

Stantec has reviewed the results of this fourth quarter monitoring on behalf of HDC.

Monitoring results for other aspects of the landfill operations, such as air quality/odour, stormwater and soil are reported annually, as per resource consent requirements.

Samples were collected from 25 groundwater bores, the landfill leachate at a manhole next to the leachate pond, and from five surface water sites during the period from February 2021 to April 2021 around and on the Levin Landfill. The samples were analysed for the parameters set out in Discharge Permit 6010.

The April 2021 samples were collected progressively over a 4-day period, which is well within the normally accepted 7 days. Meeting the sampling timeframe means that there is greater confidence in comparing results from different parts of the site.

The resource consent for the landfill (namely discharge permit 6010) contains compliance limits for the quality of deeper and shallow groundwater which are based upon the Drinking Water Standards for New Zealand – Maximum Acceptable Values (DWSNZ MAVs), Guideline Values for aesthetic determinants (DWSNZ GVs), and the ANZECC 2000 Livestock Drinking Water (ANZECC LDW) trigger values respectively. Compliance limits for surface water are based on the ANZECC 2000 Aquatic Ecosystems (ANZECC AE) 95% trigger values, as provided under the revised Resource Consent Condition approved in December 2019.

The February 2021 to April 2021 monitoring results have been assessed against these limits, where they are applicable.

Twenty non-compliances with resource consent conditions were recorded at eight individual monitoring locations, as follows:

- Exceedances of the DWSNZ MAV value for e.coli (at bores E2D and Xd1) in the deeper gravel aquifer in April 2021.
- Exceedances of the DWSNZ MAV value for dissolved manganese (at bores C2DD, E2D and Xd1) in the deeper gravel aquifer in April 2021.
- Exceedance of the ANZECC AE (95%) trigger value for nitrate-n (at the Tatana Drain) in April 2021.
- Exceedances of the ANZECC AE (95%) trigger values for nitrate-n, aluminium, and dissolved copper (at HS1A (new), HS1, HS2, and HS3) in Hokio Stream in February 2021.
- Exceedance of the ANZECC AE (95%) trigger value for dissolved copper (at HS2) in Hokio Stream in April 2021.
- Exceedance of the ANZECC AE (95%) trigger value for dissolved zinc (at HS1) in Hokio Stream in February 2021.

The February 2021 to April 2021 results were also considered in the context of background water quality, both within the groundwater aquifers (shallow and deep bores) and the surface water receiving environment. For example, low pH at background bore G1S, and elevated aluminium and iron concentrations in the same bore indicate that groundwater could be being impacted by up-gradient activities unrelated to the landfill operations.



**HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE
MONITORING REPORT**

Results from a sample of leachate, taken from a manhole next to the leachate pond, were within the range of data obtained from previous monitoring events at this leachate manhole and are generally well below those recorded at typical Class 1 landfills in New Zealand. The Ammoniacal-nitrogen concentration marginally exceeded the typical range, which is slightly higher than in previous results.



1.0 INTRODUCTION

Horowhenua District Council (HDC) first commissioned Stantec New Zealand (then Montgomery Watson) to carry out environmental reporting for the discharge consent monitoring undertaken at the Levin Landfill site in the early 2000s. Monitoring has been undertaken every three months at 31 locations, as required by the resource consent conditions (namely for discharge permit 6010). These sampling locations consist of 25 boreholes penetrating the sand and gravel aquifers, four surface water sampling locations within Hokio Stream, one surface sampling location along the Tatana Drain and a leachate sampling point, as shown in the Site Plan in Appendix A.

The Levin Landfill site is comprised of two landfills: one old, closed and unlined landfill and one new, lined and active landfill. The new landfill footprint is being developed in stages. The most recent stage is Stage 3C which was developed in 2017, though landfill operations are also now occurring over the top of Stages 1A, 2 and 3C.

The Levin Landfill site is located above two identified aquifers, a shallow sand aquifer and a deeper gravel aquifer. The shallow aquifer is unconfined, has a low to moderate permeability, and flows in a northerly direction. The deeper gravel aquifer is a confined to semi-confined aquifer. Horizons Regional Council hydrology staff advised that '*the general confined groundwater flow direction is towards the west*'. Groundwater quality in the area is highly variable because of interaction with peat deposits that are prevalent in the area, localised effects such as from grazing activities, droppings from scavenging birds and from nitrogen-fixing plants such as gorse.

Since July 2010 groundwater has been tested for dissolved metals and nutrients, rather than for total concentrations of these parameters.

The review of the resource consent conditions was finalised in December 2019. Changes have been made to some of the surface water and groundwater monitoring conditions and HDC has acted on all the changes. Sampling since the January 2021 sampling round has been in line with what has been done previously, but different reference parameters have been applied to assess the surface water sampling results, as required by the new consent conditions.

This report presents the results for the April 2021 quarterly monitoring round.

Please note, the laboratory detection limit for e-coli is 1 cfu/100ml however in the results received, often results were noted as being below detection levels at 100 cfu/100ml or 4 cfu/100ml. This is assumed to be an error and has been noted in the report as being "not detected".

2.0 GROUNDWATER AND SURFACE WATER MONITORING

2.1 SAMPLE ANALYSIS

Samples were collected by Downer (a contractor to HDC) on 2 Feb 2021; 4 March 2021; and 12, 13, 14 and 15 April 2021. Samples were received by Eurofins ELS Ltd in Lower Hutt, Wellington on 3 February 2021; 4 March 2021; and 13, 14, 15 and 16 April 2021.

The sampling programme for April 2020 - January 2023 is summarised in the schedule in Appendix B. From July 2019, faecal coliform counts analyses have been included within the indicator and comprehensive analytical suites, as agreed by HDC with the Horizons Regional Council (HRC). This means that faecal coliform counts will be assessed more frequently throughout each year, as compared to the past monitoring regime.

Groundwater samples taken from the boreholes were analysed for the comprehensive suite of parameters which are outlined in Table 2-1. Surface water samples from Hokio Stream and samples of landfill leachate effluent were analysed for the comprehensive suite of parameters. Surface water samples collected from the Tatana Property drain were analysed based on a specific parameter list that has been included in the reviewed resource consent conditions. From the April 2020 monitoring round onwards, sampling of the Tatana Drain has followed the comprehensive and indicator suites of parameters used for other surface water sampling.

Note that, following the revision of the resource consent conditions which were approved in December 2019, soluble carbonaceous BOD₅ (scBOD₅) and soluble mercury (Hg) have each been added to the indicator and comprehensive suites of parameters, and E. coli to the comprehensive suite of parameters. The scBOD₅ and E. coli parameters replace BOD₅ and faecal coliforms respectively. Monitoring of these additional parameters has commenced from the April 2020 sampling round.

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Table 2-1: Comprehensive Parameters

Type	Parameters
Characteristics	pH Electrical Conductivity (EC) Alkalinity Total Hardness Suspended Solids
Oxygen demand	Chemical Oxygen Demand (COD), scBOD5++
Nutrients*	Nitrate nitrogen ($\text{NO}_3\text{-N}$), Ammoniacal-nitrogen ($\text{NH}_4\text{-N}$), Dissolved Reactive Phosphorus (DRP), Sulphate (SO_4)
Metals*	Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron**, Magnesium, Manganese, Mercury++, Nickel, Lead, Zinc
Other elements	Boron, Calcium, Chloride, Potassium, Sodium**
Organics	Total Organic Carbon, Total Phenols, Volatile Acids, sVOCs, VOCs
Biological+	E. coli

Note:

*Analyses performed for nutrients and metals are for dissolved rather than total concentrations.

**Selected bores as per stormwater consent 102559

+Faecal coliforms added from July 2019 onwards (see Appendix B)

++Soluble carbonaceous BOD5 (scBOD5) and Soluble Mercury added as per revised consent conditions for Discharge Permit 6010, December 2019

Those chemical constituents for which concentrations were below laboratory detection limits during the reporting period have had results set at 50% of the laboratory detection limit, which is then used to calculate a median value that is used in the annual report. This is standard practice when dealing with chemical concentrations in water. However, the same rule cannot be applied for E. coli in the context of the Levin Landfill.

The laboratory detection limit for E. coli is 4 CFU/100mL (4 Colony Forming Units/100mL). As the resource consent requires that groundwater results for E. coli be compared against the DWSNZ (for compliance), which sets a value of NIL (i.e., 0 CFU/100mL), we have chosen to indicate where E. coli organisms were not detected, rather than calculating a median as we would for chemical constituents (described above). This method has been applied in all instances where E. coli numbers are assessed for compliance with the DWSNZ.

2.2 BACKGROUND GROUNDWATER QUALITY

The quality of the natural background water up-gradient from the landfill site is not subject to any consent conditions. However, for comparison purposes, both the ANZECC LDW trigger values and the DWSNZ guidelines were used to benchmark the quality of water up-gradient from the landfill site.

Groundwater samples were collected from the two background bores situated hydraulically up-gradient from both the new and old landfills to the southeast of the site (bores G1S and G1D, see Site Plan, Appendix A). These two bores were constructed in late 2009 to sample background water quality from the two main hydrogeological units.

The results are presented in Table 2-2.

Bore F3 is also included in the background table as it is near the southern boundary of the landfill site (and further west) and is unlikely to be impacted by landfill activities. A full laboratory report containing analytical results is presented in Appendix C.

HOROWHENUA DISTRICT COUNCIL
 LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Table 2-2: Background Monitoring Results for April 2021

Determinant	Units	DWSNZ MAV	ANZECC LDW	April 2021		
				G1S	G1D	F3
Water level	mBGL	-	-	14.29	14.81	5.165
pH	-	7 to 8.5*	6 to 9	6.7	7.1	7.0
Suspended Solids	mg/l	-	-	49	2	3
Phenol	mg/L	-	-	0.025	0.025	0.025
VFA	mg/L	-	-	2.5	2.5	2.5
TOC	mg/L	-	-	32.4	1.9	1.5
Alkalinity	mg CaCO ₃ /L	-	-	69	58	43
Conductivity	mS/m	-	-	39.6	28.1	19.2
COD	mg/L	-	-	91	7.5	7.5
scBOD5	mg/L	-	-	3.0	3.0	1.5
E. Coli	CFU/100ml	NIL	100	ND	ND	16
Chloride	mg/L	250*	-	66.3	31.5	17.4
Nitrate-N	mg/L	11.3	90.3	0.03	0.005	1.53
Sulphate	mg/L	-	-	6.27	19.5	8.39
Ammoniacal-N	mg/L	1.17	-	0.05	0.09	0.005
Hardness	mg CaCO ₃ /L	-	-	41	56	33
Calcium	mg/L	-	1000	7.56	8.35	4.84
Magnesium	mg/L	-	-	5.34	8.5	4.99
Potassium	mg/L	-	-	3.93	6.07	4.930
Sodium	mg/L	200*	-	69.6	31	22
D.R. Phosphorus	mg/L	-	-	0.071	0.034	0.136
Dissolved Aluminium	mg/L	0.1*	5	0.138	0.001	0.001
Dissolved Arsenic	mg/L	0.01	0.1	0.002	0.002	0.002
Dissolved Boron	mg/L	1.4	5	0.015	0.04	0.015
Dissolved Cadmium	mg/L	0.004	0.01	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	0.05	1	0.002	0.0005	0.0005
Dissolved Copper	mg/L	2	0.4 #	0.0080	0.00025	0.0007
Dissolved Iron	mg/L	0.2*	-	2.89	0.675	0.0025
Dissolved Lead	mg/L	0.01	0.1	0.00025	0.00050	0.00025
Dissolved Manganese	mg/L	0.4	-	0.0461	0.0641	0.00025
Dissolved Mercury	mg/L	0.007	0.002	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	0.08	1	0.0016	0.00025	0.00025
Dissolved Zinc	mg/L	1.5*	20	0.001	0.001	0.001

Notes:

*denotes guideline values for aesthetic determinants (G.V.)

copper trigger values range from 0.4 mg/L for sheep, up to 5 mg/L for poultry

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Bold – denotes an exceedance of the relevant DWSNZ guidelines

All '<' values have been reported as half the detection limit for statistical purposes and are expressed in italics

'ND' indicates where E. coli were not detected

n/r – not required to be tested during this monitoring period

The results in Table 2-2 indicate that all of the bores (G1S, G1D and F3) contain groundwater that has concentrations of all monitored parameters within the ANZECC LDW trigger values.

There were five exceedances of the DWSNZ limits during the April 2021 monitoring round, as follows:

- For pH in bore G1S (6.7 being below the DWSNZ range of 7 – 8.5)
- For E.Coli in bore F3 (being 16 which exceeds the DWSNZ limit of Nil)
- For dissolved aluminium in bore G1s (being 0.138mg/L which exceeds the DWSNZ limit of 0.1mg/L)
- For dissolved iron in bores G1S and G1D (being 2.89mg/L and 0.675mg/L, respectively, which exceeds the DWSNZ limit of 0.2mg/L).

It is noted that bores G1S and G1D are background bores and therefore any exceedances of the DWSNZ in these bores do not constitute non-compliances with the consent conditions.

2.3 GROUNDWATER QUALITY HYDRAULICALLY DOWN-GRADIENT OF THE NEW LANDFILL

Monitoring is carried out within the two main hydrogeological units for bores hydraulically up-gradient of the old landfill and hydraulically down-gradient of the new landfill respectively.

2.3.1 Shallow Aquifer

Bores D1, D2, D3(r), D4, D5, D6 and E1S (Refer to Site Plan, Appendix A) are located hydraulically up-gradient of the old landfill, but down-gradient of the new landfill. This means they are not influenced by potential leaching from the old landfill and can act as a warning system for any leaching from the new landfill. Borehole D4 is likely to show evidence of any leaching from the new landfill. Borehole D5 is located at the south western corner of the site and is expected to provide an indication of shallow background groundwater quality because it is unlikely to be influenced by either landfill. It is unlikely that leachate from the new landfill will significantly affect groundwater quality due to the leachate collection system which is in place at the new landfill; however, these bores would still give early warning of any potential problems.

The results from the April 2021 monitoring round for these bores are presented in Table 2-3. The results have been compared with the ANZECC LDW trigger values as per the consent conditions. The full laboratory report is included in Appendix C.

There were **no exceedances of the resource consent conditions during the April 2021** monitoring round.

Selected down-gradient bores were also analysed for volatile organic compounds (VOC) in April 2021. Toluene was the only substance detected (at bores D1, D3r, D4, D5, and D6) though none of these contaminants exceeded the ANZECC 2000 guideline. The concentrations detected at the bores are detailed in Table 2-4.

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Table 2-3: D-Series and E1S Monitoring Bore Results for April 2021

Determinant	Units	ANZECC LDW	D1	D2	D3(r)	D4	D5	D6	E1S
Water level	mBGL	-	17.04	21.68	4.69	7.98	9.59	16.59	11.51
pH	-	6 to 9	6.7	6.5	6.8	7.0	7.0	6.9	6.9
Suspended Solids	mg/l	-	2	10	3	2	2	2	5
Phenol	mg/L	-	0.025	0.025	0.025	0.025	0.025	0.025	0.025
VFA	mg/L	-	2.5	2.5	2.5	25	2.5	2.5	2.5
TOC	mg/L	-	1.3	11.7	3.0	3.5	1.9	1.2	6.4
Alkalinity	mg CaCO ₃ /L	-	133	134	55	65	62	69	70
Conductivity	mS/m	-	48.4	40.2	22.30	30.6	29.4	37.5	26.7
COD	mg/L	-	21	38	19	7.5	7.5	7.5	25
scBOD ₅	mg/L	-	0.5	<6	3	3.0	1.5	0.5	3.0
E-Coli	CFU/100ml	100	ND	8	ND	2	2	ND	ND
Chloride	mg/L	-	27.2	33	20.9	36.4	26.7	17.4	26.1
Nitrate-N	mg/L	90.3	9.44	0.005	0.17	0.005	1.73	16.60	0.005
Sulphate	mg/L	-	5.07	0.01	9.86	11.8	16.0	28.1	5.37
Ammoniacal-N	mg/L	-	0.005	0.51	0.15	0.24	0.005	0.005	0.18
Hardness	mg CaCO ₃ /L	-	139	100	36	60	61	97	59
Calcium	mg/L	1000	25.9	17.6	7.07	11.6	10.3	17.8	11.6
Magnesium	mg/L	-	18.0	13.7	4.44	7.67	8.61	12.8	7.19
Potassium	mg/L	-	10.7	9.73	5.54	6.09	7.0	8.89	5.95
Sodium	mg/L	-	43	31.4	24.8	29.2	28.3	30.8	26
D.R. Phosphorus	mg/L	-	0.100	0.036	0.017	0.021	0.104	0.098	0.059
Dissolved Aluminium	mg/L	5	0.001	0.004	0.001	0.001	0.001	0.001	0.004
Dissolved Arsenic	mg/L	0.1	0.001	0.0005	0.007	0.003	0.0005	0.001	0.001
Dissolved Boron	mg/L	5	0.05	0.05	0.03	0.015	0.03	0.05	0.015
Dissolved Cadmium	mg/L	0.01	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	1	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Determinant	Units	ANZECC LDW	D1	D2	D3(r)	D4	D5	D6	E1S
Dissolved Copper	mg/L	0.4 #	0.0011	<i>0.00025</i>	<i>0.00025</i>	<i>0.00025</i>	0.0006	0.0006	<i>0.00025</i>
Dissolved Iron	mg/L	-	<i>0.0025</i>	3.95	2.89	1.54	0.033	0.02	1.96
Dissolved Lead	mg/L	0.1	<i>0.00025</i>						
Dissolved Manganese	mg/L	-	<i>0.00025</i>	0.362	0.177	0.209	0.0095	0.0018	0.239
Dissolved Mercury	mg/L	0.002	<i>0.00025</i>						
Dissolved Nickel	mg/L	1	<i>0.00025</i>						
Dissolved Zinc	mg/L	20	0.001	0.005	0.001	0.001	0.001	0.002	0.001

Notes:

All '<' values have been reported as half the detection limit for statistical purposes and are expressed in italics

copper trigger values range from 0.4 mg/L for sheep, up to 5 mg/L for poultry

'ND' indicates where E. coli were not detected

n/r – not required to be tested during this monitoring period

Table 2-4: VOCs detected in samples from the shallow aquifer bores during the April 2021 sampling round

Determinant	Laboratory detection limit (from Eurofins-ELS) mg/L	ANZECC 2000 DGV (mg/L)	Detected concentrations at down-gradient bores (mg/L)					Common source/usage of determinand (from relevant ANZECC 2000 Volume 2, Section 8.3.7 technical briefs)
			D1	D3r	D4	D5	D6	
Toluene	0.0005	0.2 (99 th percentile) 0.35 (95 th percentile) 0.47 (90 th percentile) 0.64 (80 th percentile)	0.0012	0.0006	0.0005	0.0006	0.0008	Hydrocarbon; fuel additives (vehicles)

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

2.3.2 Deep Gravel Aquifer

Bores E1D, C2DD, E2D and Xd1 all penetrate the deeper gravel aquifer. Deep groundwater flow is assumed to be towards the northwest.

Boreholes E2D and C2DD are located to the north-northwest of both the landfills and are therefore considered to be hydraulically down gradient of both landfills.

Borehole E1D is located to the southwest of the old landfill and it is therefore considered that this bore would be unlikely to be affected by either landfill.

Bore Xd1 was installed in early 2021 as a requirement of the reviewed resource consent conditions (December 2019). It is located on the western boundary of the site and slightly downstream of the old landfill.

Results for the April 2021 compliance monitoring round are presented in Table 2-5. The results have been compared with the DWSNZ as per the requirements of discharge consent 6010. The full laboratory report is included in Appendix C.

Selected deep aquifer bore samples were also analysed for semi-volatile organic compounds (SVOC) in the April 2021 sampling round. Bis(2-ethylhexyl) adipate was the only substance detected at E2D. The concentration detected at E2D is 0.0016 mg/L, however, though there are no ANZECC 2000 guidelines for this toxicant.

Table 2-5: Results for Monitoring Bores within the Deep Aquifer for April 2021

Determinant	Units	DWSNZ MAV	E1D	C2DD	E2D	Xd1
Water level	mBGL	-	11.41	2.79	4.78	2.29
pH	-	7 to 8.5*	7.5	7.3	7.5	7.5
Suspended Solids	mg/l	-	9	187	7	9
Phenol	mg/L	-	0.025	0.025	0.025	0.025
VFA	mg/L	-	2.5	2.5	2.5	2.5
TOC	mg/L	-	3.0	5.5	2.8	4.7
Alkalinity	mg CaCO ₃ /L	-	151	200	138	162
Conductivity	mS/m	-	44.7	55.5	44.4	54.1
COD	mg/L	-	26	26	7.5	20
scBOD ₅	mg/L	-	1.5	1.5	0.5	1.5
E-Coli	CFU/100ml	NIL	ND	ND	4	4
Chloride	mg/L	250*	38.5	41.3	40.6	57.9
Nitrate-N	mg/L	11.3	0.005	0.005	0.005	0.005
Sulphate	mg/L	-	0.01	0.04	0.01	0.01
Ammoniacal-N	mg/L	1.17	0.2	0.31	0.25	0.36
Hardness	mg CaCO ₃ /L	-	138	166	121	167
Calcium	mg/L	-	32.6	42.6	26.8	39.1
Magnesium	mg/L	-	13.8	14.4	13.2	16.7
Potassium	mg/L	-	5.14	7.57	6.67	5.32
Sodium	mg/L	200*	37.2	39.1	40.9	50
D.R. Phosphorus	mg/L	-	0.390	0.617	0.624	0.109
Dissolved Aluminium	mg/L	0.1*	0.0010	0.001	0.001	0.001
Dissolved Arsenic	mg/L	0.01	0.007	0.004	0.001	0.0005
Dissolved Boron	mg/L	1.4	0.06	0.06	0.07	0.06
Dissolved Cadmium	mg/L	0.004	0.0001	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	0.05	0.0005	0.0005	0.0005	0.0005

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Determinant	Units	DWSNZ MAV	E1D	C2DD	E2D	Xd1
Dissolved Copper	mg/L	2	0.00025	0.00025	0.00025	0.00025
Dissolved Iron	mg/L	0.2*	0.023	0.016	0.046	0.071
Dissolved Lead	mg/L	0.01	0.00025	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	0.4	0.24	0.742	0.409	0.5010
Dissolved Mercury	mg/L	0.007	0.00025	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	0.08	0.00025	0.00025	0.00025	0.00025
Dissolved Zinc	mg/L	1.5*	0.001	0.004	0.001	0.001

Notes:

* denotes guideline values for aesthetic determinants (G.V.)

Bold – denotes an exceedance of the relevant DWSNZ (2008) standard

All '<' values have been reported as half the detection limit for statistical purposes and are expressed in italics

n/r – not required to be tested during this monitoring period

'ND' indicates where E. coli were not detected

There were five exceedances of the DWSNZ limits in samples from the deep gravel aquifer during the April 2021 monitoring round, as follows:

- For E.Coli in bores E2D and Xd1 (both being 4 CFU/100ml which exceeds the DWSNZ limit of Nil)
- For dissolved manganese in bores C2DD, E2D and Xd1 (being 0.742mg/L, 0.409mg/L and 0.501mg/L, respectively, which all exceeded the DWSNZ MAV of 0.4mg/L).

Please note, the manganese exceedances at bores C2DD and E2D are within the historical range of concentrations observed.

Sampling at Xd1 has been too limited to establish firm trends but, for the most recent previous sampling round, the result for manganese was similar to this round.

2.4 IMPACT OF OLD LANDFILL ON GROUNDWATER QUALITY

Water sampling is carried out to characterise the groundwater quality in a series of shallow bores situated hydraulically down-gradient from the old unlined landfill.

The Series B boreholes are located within 50 m of the old landfill in a line along its northern edge.

The Series C boreholes are located further down the hydraulic gradient from the old landfill towards Hokio Beach Road to detect whether leachate is moving off site.

Borehole E2S is located northwest of the old landfill to detect any leachate moving directly towards the nearest house down-stream of the site.

Bore G2S was installed in late 2009 and is located to the north of the landfill site, hydraulically down-gradient of the old landfill by Hokio Road and the entrance road to the landfill.

Bores Xs1 and Xs2 are located along Hokio Beach Road, within the road reserve. Bore Xs1 is adjacent to Tatana's property and bore Xs2 is next to the driveway leading to a Council-owned property. Bore Xs2 is considered to be hydraulically upgradient of the old landfill (See Site Plan, Appendix A).

The results from the April 2021 consent monitoring round for these bores are presented in Table 2-6 and have been compared with the ANZECC LDW trigger values as per the discharge consent 6010. The full laboratory report is included in Appendix C.

There were **no exceedances of the ANZECC LDW trigger values during the April 2021** monitoring round. Therefore, these results show full compliance with the resource consent conditions.

Selected down-gradient bores were also analysed for volatile organic compounds (VOC) in April 2021. Toluene was the only substance detected (at bores B1, B3, Xs1, and G2s), although no toluene concentrations exceeded the ANZECC 2000 guideline. The concentrations detected at the four bores are reported in Table 2-7.

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Table 2-6: Monitoring Results for Shallow Boreholes Down-Gradient from the Old Landfill for April 2021

Determinant	Units	ANZECC LDW	E2S	B1	B2	B3	C1	C2	C2DS	G2S	Xs1	Xs2
Water level	mBGL	-	5.57	1.205	1.38	0.135	0.40	0.32	2.88	2.36	0.82	2.77
pH	-	6 to 9	7.7	6.5	6.7	7.1	6.7	7.0	6.8	6.8	6.7	6.9
Suspended Solids	mg/l	-	2	3	29	81	122	111	95	2	43	17
Phenol	mg/L	-	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
VFA	mg/L	-	2.5	52	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
TOC	mg/L	-	3.3	30.1	36.4	61.6	17.2	45.2	26.2	1.4	24.8	2.7
Alkalinity	mg CaCO ₃ /L	-	85	681	783	1070	281	871	464	276	513	58
Conductivity	mS/m	-	35.5	241	218	265	107	263	117	133	139	21.8
COD	mg/L	-	16	118	111	100	56	175	82	66	75	73
scBOD ₅	mg/L	-	1.5	3	3	3	3	3	3	3	3	1.5
E-Coli	CFU/100ml	100	ND	4	ND	68	ND	4	ND	ND	ND	16
Chloride	mg/L	-	39.4	339	134	166	129	215	81.2	227	112	20.8
Nitrate-N	mg/L	90.3	0.005	4.36	17.00	0.05	<0.1	0.19	0.05	0.05	0.05	0.41
Sulphate	mg/L	-	14.1	3.2	3.22	0.04	31.1	6.58	0.010	5.51	3.09	12.8
Ammoniacal-N	mg/L	-	0.33	14.3	77.5	177.0	7.82	149.0	1.33	0.02	3.20	0.02
Hardness	mg CaCO ₃ /L	-	101	578	538	300	231	227	406	237	435	54
Calcium	mg/L	1000	29.6	112.0	122.0	58.5	43.7	47.6	108.0	44.3	90.3	11.2
Magnesium	mg/L	-	6.68	72.6	56.3	37.2	29.5	26.3	33.2	30.6	50.9	6.45
Potassium	mg/L	-	5.62	25.6	61.4	104.0	20.6	84.8	12.3	18.0	23.50	3.94
Sodium	mg/L	-	26.8	216	105	127	95	189	99.6	156	92	17.6
D.R. Phosphorus	mg/L	-	0.238	0.115	0.025	0.034	0.015	0.016	0.025	0.017	0.093	0.023
Dissolved Aluminium	mg/L	5	0.001	0.005	0.004	0.005	0.012	0.018	0.001	0.003	0.004	0.007
Dissolved Arsenic	mg/L	0.1	0.0005	0.001	0.004	0.022	0.001	0.002	0.002	0.0005	0.0005	0.0005
Dissolved Boron	mg/L	5	0.015	1.47	2.37	1.00	0.64	2.05	0.85	1.02	0.59	0.04
Dissolved Cadmium	mg/L	0.01	0.0001	0.0001	0.0001	0.0001	0.00010	0.0001	0.0001	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	1	0.0005	0.001	0.001	0.004	0.005	0.002	0.0005	0.0005	0.001	0.0005

HOROWHENUA DISTRICT COUNCIL
LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

Determinant	Units	ANZECC LDW	E2S	B1	B2	B3	C1	C2	C2DS	G2S	Xs1	Xs2
Dissolved Copper	mg/L	0.4 #	0.00025	0.0116	0.0025	0.0091	0.0008	0.0006	0.00025	0.0065	0.00025	0.0008
Dissolved Iron	mg/L	-	0.064	0.047	0.315	0.393	1.65	0.719	2.61	0.169	16.40	0.111
Dissolved Lead	mg/L	0.1	0.00025	0.00025	0.00025	0.00025	0.00060	0.00025	0.00025	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	-	0.237	12.6	3.16	2.65	0.350	0.0531	1.76	0.160	0.831	0.106
Dissolved Mercury	mg/L	0.002	0.00025	0.00050	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	1	0.00025	0.0056	0.0031	0.0098	0.0008	0.0053	0.0022	0.0034	0.0024	0.00025
Dissolved Zinc	mg/L	20	0.002	0.006	0.003	0.001	0.001	0.003	0.001	0.002	0.001	0.004

Notes:

All '<' values have been reported as half the detection limit for statistical purposes and are expressed in italics

n/r – not required to be tested during this monitoring period

copper trigger values range from 0.4 mg/L for sheep, up to 5 mg/L for poultry

'ND' indicates where E. coli were not detected

Table 2-7: VOCs detected in samples from down-gradient groundwater bores during the April 2021 sampling round

Determinant	Laboratory detection limit (from Eurofins-ELS) mg/L	ANZECC 2000 DGV (mg/L)	Detected concentrations at down-gradient bores (mg/L)				Common source/usage of determinant (from relevant ANZECC 2000 Volume 2, Section 8.3.7 technical briefs)			
			B1	B3	G2s	Xs1				
Toluene	0.0005	0.2 (99 th percentile) 0.35 (95 th percentile) 0.47 (90 th percentile) 0.64 (80 th percentile)	0.0008	0.0007	0.0009	0.0009	Hydrocarbon; fuel additives (vehicles)			

2.5 GROUNDWATER QUALITY DOWN-GRADIENT OF THE IRRIGATION AREA

The F-series boreholes intersect the shallow aquifer down-gradient of the area that was used to irrigate leachate from 2004 to October 2008. All leachate is now pumped to the Levin Wastewater Treatment Plant. The F1 borehole is located within the area where leachate from the new landfill was irrigated. The F2 and F3 boreholes are in an area that was set aside for leachate irrigation but was never used as such. It is expected that bores F2 and F3 would therefore be representative of background groundwater quality.

The results from the F series boreholes are presented in Table 2-8 and have been compared with the ANZECC LDW trigger values, as per the discharge consent 6010. The full laboratory report is included in Appendix C.

There were **no exceedances of the resource consent conditions** during the April 2021 monitoring round.

Selected deep aquifer bores were also analysed for volatile organic compounds (VOC) in the April 2021 sampling round. Toluene was the only substance detected at F1, with a concentration of 0.0007 mg/L which does not exceed the ANZECC 2000 guidelines.

Table 2-8: Results from Monitoring Bores in the Irrigation Area for April 2021

Determinant	Units	ANZECC LDW	F1	F2	F3
Water level	mBGL	-	7.905	2.76	5.165
pH	-	6 to 9	6.9	7.0	7.0
Suspended Solids	mg/l	-	2	2.5	2.5
Phenol	mg/L	-	0.025	0.025	0.025
VFA	mg/L	-	2.5	2.5	2.5
TOC	mg/L	-	5.1	1.6	1.5
Alkalinity	mg CaCO ₃ /L	-	113	51	43
Conductivity	mS/m	-	48.5	21.3	19.2
COD	mg/L	-	26	17	7.5
scBOD ₅	mg/L	-	1.5	1.5	1.5
E-Coli	CFU/100ml	100	27	ND	16
Chloride	mg/L	-	61	22.3	17.4
Nitrate-N	mg/L	90.3	2.02	0.18	1.53
Sulphate	mg/L	-	7.59	9.49	8.39
Ammoniacal-N	mg/L	-	0.005	0.005	0.005
Hardness	mg CaCO ₃ /L	-	130	38	33
Calcium	mg/L	1000	19.0	5.81	4.84
Magnesium	mg/L	-	19.9	5.59	4.99
Potassium	mg/L	-	9.18	5.22	4.930
Sodium	mg/L	-	41.9	26.3	22
D.R. Phosphorus	mg/L	-	0.155	0.132	0.136
Dissolved Aluminium	mg/L	5	0.001	0.001	0.001
Dissolved Arsenic	mg/L	0.1	0.002	0.001	0.002
Dissolved Boron	mg/L	5	0.03	0.04	0.015
Dissolved Cadmium	mg/L	0.01	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	1	0.0005	0.0005	0.0005
Dissolved Copper	mg/L	0.4 #	0.0013	0.0010	0.0007

Determinant	Units	ANZECC LDW	F1	F2	F3
Dissolved Iron	mg/L	-	0.0025	0.015	0.0025
Dissolved Lead	mg/L	0.1	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	-	0.0038	0.0139	0.00025
Dissolved Mercury	mg/L	0.002	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	1	0.00025	0.00025	0.00025
Dissolved Zinc	mg/L	20	0.001	0.001	0.001

Notes:

All '<' values have been reported as half the detection limit for statistical purposes and are expressed in italics

n/r – not required to be tested during this monitoring period

copper trigger values range from 0.4 mg/L for sheep, up to 5 mg/L for poultry

'ND' indicates where E. coli were not detected

2.6 LEACHATE EFFLUENT RESULTS

Leachate effluent from the landfill is not subject to any water quality consent conditions. However, for comparison purposes, typical leachate characteristics for landfills, as published by the Waste Management Institute New Zealand (*Technical Guidelines for Disposal to Land*, August 2018, WasteMINZ), have been compared against the leachate quality monitoring results (Table 2-9). The full laboratory report is included in Appendix C. Table 2-9 shows that the concentrations of monitored parameters for leachate effluent samples collected in February 2021, March 2021, and April 2021 were mostly within the typical ranges to be expected for this type of landfill. The result for Ammonia-N in April 2021 was slightly above the maximum range value and all results for mercury were below the typical leachate ranges. However, these results are not considered to be an issue.

It is also noted that the leachate effluent is sent to Levin WWTP for treatment.

Table 2-9: Results from Leachate Effluent Monitoring for February, March and April 2021

Determinant	Units	Typical Leachate Characteristics*	Leachate Effluent		
			February	March	April
pH		5.9 - 8.5	8.0	8.2	7.6
Suspended Solids	mg/l	-	33	38	48
Phenol	mg/L	-	0.025	0.025	0.025
VFA	mg/L	-	11	16	140
TOC	mg/L	-	551	643	741
Alkalinity	mg CaCO ₃ /L	-	5520	6480	6740
Conductivity	mS/m	308 – 27,900	1360	1570	1620
COD	mg/L	84 – 5,090	5080	2760	4650
scBOD ₅	mg/L	-	79	104	149
E-Coli	CFU/100mL	-	270	ND	ND
Chloride	mg/L	45 – 2,584	1050	1270	1240
Nitrate-N	mg/L	-	0.05	0.50	0.05
Sulphate	mg/L	-	24.9	44.9	35.2
Ammonia-N	mg/L	3.4 – 1,440	1280	1390	1500
Hardness	mg CaCO ₃ /L	-	409	438	480
Calcium	mg/L	-	87	89.6	101
Magnesium	mg/L	-	46.4	52.0	55.4
Potassium	mg/L	-	738	694	803

Determinant	Units	Typical Leachate Characteristics*	Leachate Effluent		
Sodium	mg/L	50 – 4,000**	841	1020	1010
D.R. Phosphorus	mg/L	-	12.4	15.3	14.3
Dissolved Aluminium	mg/L	-	0.709	0.787	0.795
Dissolved Arsenic	mg/L	-	0.278	0.376	0.359
Dissolved Boron	mg/L	0.54 – 20.1	6.48	6.32	6.89
Dissolved Cadmium	mg/L	-	0.0001	0.0100	0.0100
Dissolved Chromium	mg/L	-	0.784	0.833	0.693
Dissolved Copper	mg/L	-	0.0080	0.0087	0.0137
Dissolved Iron	mg/L	1.6 – 220	4.26	4.24	4.64
Dissolved Lead	mg/L	0.001 - 0.42	0.0027	0.0025	0.025
Dissolved Manganese	mg/L	0.3 - 45***	1.17	1.22	1.28
Dissolved Mercury	mg/L	0.2 - 50	0.00025	0.00025	0.025
Dissolved Nickel	mg/L	0.02 – 2.05**	0.111	0.127	0.137
Dissolved Zinc	mg/L	-	0.054	0.004	0.100

Notes:

* for Class 1-type landfills, Table 5-5, p82, Technical Guidelines for Disposal to Land, WasteMINZ August 2018 (same as Table 4.2 of the CAE Landfill Guidelines 2000, but corrections made to Table 5-5 in line with Table 4.2)

**Data taken from Table 5-4, p81 of the same guideline, for parameters for which no differences in concentrations between the phases of landfill development could be observed

***Data taken from Table 5-4, p81 of the same guideline, for parameters during the methanogenic phase

Bold – denotes a deviation from the typical leachate characteristics range

Samples of leachate were collected and analysed for volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) in April 2021.

Five VOCs were detected in the samples and compared against the relevant ANZECC guidelines in 10 below. Of these five results, the concentration of only one (Naphthalene) exceeded the guideline values at the 99th percentile and this is shown in **bold** in the table.

Table 2-10: VOCs detected in samples of leachate from the April 2021 sampling round

Determinant	Laboratory detection limit (from Eurofins-ELS) mg/L	Detected concentration (mg/L)	ANZECC 2000 default guideline value(s) for toxicants (<i>percentile for species protection in brackets</i>) (mg/L)	Common source/usage of determinant (from relevant ANZECC 2000 Volume 2, Section 8.3.7 technical briefs)
Naphthalene	0.0005	0.0046	0.0025 (99 th percentile) 0.016 (95 th percentile) 0.037 (90 th percentile) 0.085 (80 th percentile)	A Polycyclic Aromatic Hydrocarbon (PAH) found in runoff from road surfaces; generally produced from anthropogenic combustion processes
Benzene	0.0013	0.0033	Not defined	No brief available
o-Xylene	0.0005	0.0165	0.2 (99 th percentile) 0.35 (95 th percentile) 0.47 (90 th percentile) 0.64 (80 th percentile)	Hydrocarbon; used in aviation fuel and polyester manufacture.
Toluene	0.0005	0.0076	0.18	Hydrocarbon; fuel additives (vehicles)
Total p,m Xylene, Ethylbenzene	0.0015	0.0399	Not defined	No brief available

2.7 TATANA PROPERTY DRAIN

A drain is located on the Tatana property (see Site Plan in Appendix A). Since July 2015 HDC has agreed to sample surface water from this drain for a selection of parameters that were set by HRC. Four sampling points were selected to represent the top of the drain (SW1), middle of the drain (SW2 and SW3) and lower drain (SW4).

The revised consent conditions reduced the extent of sampling to one location. This is known as 'TD1' and is the same sampling location as for the previously denoted 'SW3'.

Results from the April 2021 sampling round are presented in Table 2-11 and have been compared with the ANZECC AE¹ 95% trigger values, as per the revised resource consent conditions.

Table 2-11 Tatana Drain Monitoring Results for April 2021

Determinant	Units	ANZECC AE (95%)	TD1 (formerly SW3)
pH	-	-	7.2
Suspended Solids	mg/l	-	61
Phenol	mg/L	-	0.025
VFA	mg/L	-	2.5
TOC	mg/L	-	25.5
Alkalinity	mg CaCO ₃ /L	-	154
Conductivity	mS/m	-	63.1
COD	mg/L	-	50
scBOD ₅	mg/L	2	3
E-Coli	CFU/100ml	-	38
Chloride	mg/L	-	77.3
Nitrate-N	mg/L	0.16	3.8
Sulphate	mg/L	-	6.26
Ammoniacal-N	mg/L	2.1	0.040
Hardness	mg CaCO ₃ /L	-	137
Calcium	mg/L	-	26.2
Magnesium	mg/L	-	17.3
Potassium	mg/L	-	22.0
Sodium	mg/L	-	57.6
D.R. Phosphorus	mg/L	-	0.044
Dissolved Aluminium	mg/L	0.055	0.010
Dissolved Arsenic	mg/L	0.024	0.0005
Dissolved Boron	mg/L	-	0.27
Dissolved Cadmium	mg/L	0.0002	0.0001
Dissolved Chromium	mg/L	-	0.0005
Dissolved Copper	mg/L	0.0014	0.00025
Dissolved Iron	mg/L	-	0.158
Dissolved Lead	mg/L	0.0034	0.00025
Dissolved Manganese	mg/L	1.9	0.0168
Dissolved Mercury	mg/L	0.0006	0.00025
Dissolved Nickel	mg/L	0.011	0.0015

¹Australian and New Zealand Guidelines for Fresh and Marine Water Quality - Aquatic Ecosystems (AE), Australian and New Zealand Environment and Conservation Council (ANZECC), Canberra, Australia, 2000

Determinant	Units	ANZECC AE (95%)	TD1 (formerly SW3)
Dissolved Zinc	mg/L	0.008	0.001

Notes:

Bold – denotes an exceedance of the ANZECC AE 95% protection level trigger values

All '<' values have been reported as half the detection limit for statistical purposes and are expressed in italics

There was one exceedance of the resource consent conditions in a sample from the Tatana Drain property at TD1 during the April 2021 sampling round. The Nitrate-N concentration of 3.8mg/L was above the ANZECC AE 95% trigger value of 0.16mg/L and was at the higher level of historical results.

In the previous quarterly report, Ammoniacal-N was noted as exceeding the ANZECC AE (95%) limit and showing a sudden change compared to previous results. It is noted that the concentration in the April 2021 sampling round is below the ANZECC AE (95%) limit and significantly lower than historical ranges. The cause of these significant concentration fluctuations is unknown and this matter should be kept under observation in subsequent reports.

2.8 HOKIO STREAM

Surface water grab samples are obtained from Hokio Stream at sites HS1A, HS1, HS2 and HS3 (refer to Appendix A) to investigate whether groundwater containing leachate is having an adverse environmental effect on the stream. Sites HS1A and HS1 are situated up-stream of the old landfill, HS2 is situated alongside the old landfill and up-stream of the Tatana Property Drain discharge, and HS3 is located approximately 50m down-stream of the landfill site property boundary and the Tatana Property Drain discharge. Samples from these monitoring locations on Hokio Stream are analysed for comprehensive parameters every month (as shown in Appendix B).

Results from the February, March, and April 2021 sampling rounds are presented in Table 2-12 and have been compared with the ANZECC AE 95% trigger values, as per the revised resource consent conditions.

Monitoring for scBOD5 and soluble mercury concentrations have now been added as per the revised Resource Consent conditions.

The revised conditions have been recently implemented and monitoring of these additional parameters and at the new location commenced during the April 2020 monitoring round.

Table 2-12: Hokio Stream Monitoring Results for February, March, and April 2021

Determinant	Units	ANZECC AE (95%)	Consent Trigger Values (Table C1)	HS1A (new)			HS1			HS2			HS3		
				Feb	Mar	Apr	Feb	Mar	Apr	Feb	Mar	Apr	Feb	Mar	Apr
pH	-	-	-	7.5	7.7	8.0	7.4	7.7	8.0	7.5	7.6	7.8	7.5	7.6	7.6
Suspended Solids	mg/l	-	-	57	33	46	137	34	42	52	35	49	54	23	40
Phenol	mg/L	0.320	-	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
VFA	mg/L	-	-	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
TOC	mg/L	-	-	8.2	8.4	9.6	8.3	8.1	9.6	7.8	8.6	9.2	8.7	8.6	9.0
Alkalinity	mg CaCO ₃ /L	-	-	54	57	59	54	58	60	57	61	60	59	62	59
Conductivity	mS/m	-	-	23.9	23.7	23.0	24.3	24.0	23.3	24.9	25.0	24.0	25.2	25.3	24.3
COD	mg/L	-	-	51	62	51	56	77	61	47	75	57	45	66	69
scBOD ₅	mg/L	2	Monthly Ave. 2	1	1.5	3	0.50	1.5	3	1	1	3	0.50	1.5	3
E-Coli	CFU/100ml	-	-	88	600	310	120	400	350	80	310	330	160	450	330
Chloride	mg/L	-	-	23.4	27.1	23.3	25.3	24.4	23.5	25.1	26.1	25.0	29.3	26.8	26.8
Nitrate-N	mg/L	0.16	0.16	0.200	0.005	0.005	0.220	0.020	0.005	0.220	0.060	0.005	0.260	0.090	0.005
Sulphate	mg/L	-	-	16.5	16.2	9.75	18.2	14.3	9.83	16.6	14.4	10.0	19.6	14.8	10.3
Ammoniacal-N	mg/L	2.1	Max. 2.1 Ave. 0.400	0.090	0.040	0.005	0.170	0.010	0.005	0.190	0.010	0.030	0.230	0.005	0.070
Hardness	mg CaCO ₃ /L	-	-	62	62	61	65	71	64	64	65	63	65	70	59
Calcium	mg/L	-	-	13.4	13.5	13.1	14.3	15.6	13.8	13.9	14.2	13.6	14.6	15.5	12.8
Magnesium	mg/L	-	-	6.86	6.95	6.9	7.02	7.88	7.19	7.05	7.13	7.02	6.95	7.59	6.58
Potassium	mg/L	-	-	3.22	3.33	2.88	3.29	3.40	3.54	3.36	3.26	2.92	3.38	3.39	3.17
Sodium	mg/L	-	-	18.6	21.8	20.0	19.7	24.9	21.5	19.5	22.6	20.1	19.8	23.6	19.2
D.R. Phosphorus	mg/L	-	-	0.023	0.136	0.308	0.038	0.137	0.306	0.036	0.123	0.304	0.045	0.111	0.301
Dissolved Aluminium	mg/L	0.055	Med. 0.055	0.326	0.016	0.004	0.690	0.015	0.006	0.197	0.005	0.003	0.214	0.011	0.002
Dissolved Arsenic	mg/L	0.024	Med. 0.024	0.002	0.003	0.004	0.002	0.003	0.004	0.001	0.002	0.004	0.002	0.002	0.004
Dissolved Boron	mg/L	0.370	-	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06
Dissolved Cadmium	mg/L	0.0002	Med. 0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Dissolved Chromium (VI)	mg/L	0.001	-	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Dissolved Copper	mg/L	0.0014	Med. 0.0014	0.0025	0.0010	0.0012	0.0027	0.0010	0.0017	0.0018	0.0009	0.0015	0.0019	0.0009	0.0010
Dissolved Iron	mg/L	-	-	0.034	0.029	0.011	0.030	0.035	0.047	0.027	0.035	0.011	0.036	0.037	0.013
Dissolved Lead	mg/L	0.0034	Med. 0.0034	0.00160	0.00025	0.00025	0.0023	0.00025	0.00025	0.00110	0.00025	0.00025	0.00120	0.00025	0.00025
Dissolved Manganese	mg/L	1.9	-	0.2340	0.0443	0.0575	0.256	0.0638	0.0665	0.1780	0.0481	0.0600	0.1860	0.0624	0.0610
Dissolved Mercury	mg/L	0.0006	Med. 0.0006	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	0.011	Med. 0.011	0.0006	0.00025	0.0005	0.0007	0.00025	0.0007	0.0006	0.00025	0.0005	0.0006	0.00025	0.00025
Dissolved Zinc	mg/L	0.008	Med. 0.008	0.007	0.001	0.001	0.013	0.001	0.002	0.004	0.001	0.001	0.005	0.001	0.001

Notes:

NR = Not reported

Bold – denotes an exceedance of the ANZECC AE 95% protection level trigger values

All '*<*' values have been reported as half the detection limit for statistical purposes and are expressed in italics

There were **fourteen exceedances** of the resource consent conditions in samples from the Hokio Stream during the February 2021, March 2021 and April 2021 sampling rounds. These are summarised as follows:

- For February 2021, the results for Nitrate-N for all sampling locations exceeded the ANZECC AE (95%) trigger value of 0.16mg/L.
- For February 2021, the results for dissolved aluminium for all sampling locations exceeded the ANZECC AE (95%) trigger value of 0.055mg/L.
- For February 2021, the results for dissolved copper for all sampling locations exceeded the ANZECC AE (95%) trigger value of 0.0014mg/L. Additionally, in April 2021, the results for dissolved copper at HS2 sampling location exceeded the ANZECC AE (95%) trigger value.
- In February 2021, the results for dissolved zinc at HS1 sampling location exceeded the ANZECC AE (95%) trigger value of 0.008mg/L.

The difference between the sites is marginal and shows little to no change in concentrations between upstream and downstream sites. An exception is the elevated zinc concentration at HS1 in February 2021 which was not seen at the other sampling locations.

For some parameters there may be an apparent decreasing trend downstream but this is not consistent over all parameters and may even increase slightly for some parameters. Therefore, this suggests that any influence found is likely the result of upstream sources and not the old (closed) landfill.

3.0 GAS DETECTION IN MONITORING WELLS

Condition 4 of Discharge Permit 6011 requires that: "...groundwater monitoring wells shall be sampled for landfill gas when groundwater samples are taken from the wells. As a minimum, sampling shall be undertaken for methane, carbon dioxide and oxygen..."

In the past, gas monitoring results were reported in the Annual Report. A recommendation of the 2019-2020 Annual Report is that this should be done every quarter so that if any results are unusually high, that appropriate action can be undertaken, including putting safeguards in place at bores.

Appendix E summarises the results of gas testing undertaken on 08, 09 and 12 April 2021.

Methane was only detected in 1 of the 26 groundwater monitoring bores. Bore D2 recorded a concentration of 0.02% methane.

This is a substantial change compared to the last quarter monitoring round where methane was reported as being detected in 20 groundwater bores. This substantial change will be observed closely at the next monitoring round to see if it continues.

The possibility of encountering methane in groundwater bores requires that appropriate health and safety measures are adopted during monitoring, as is the case for the landfill gas extraction wells. No smoking should be permitted by personnel who undertake the groundwater sampling when in the vicinity of the groundwater wells, or in fact anywhere else on the site.

4.0 DISCUSSION

4.1 SAMPLING QUALITY CONTROL AND ASSURANCE

The landfill extends over a significant area and there are many sampling locations. However, it is important that the length of the sampling period is kept as brief as possible because a sampling period that is too long may make comparisons of results between rounds and individual monitoring locations less valid. This current monitoring round was carried out over a 4-day period between 12 April 2021 and 15 April 2021. This is a shorter timespan than the previous monitoring round which was 19 days. This monitoring period is within the recommended timeframe (i.e., obtaining all samples within 7 days) and therefore the results can be interpreted with some certainty.

4.2 BACKGROUND GROUNDWATER QUALITY

Water quality from the natural background groundwater up-gradient from the landfill site is not subject to any consent conditions.

Results since 2010 from the background bores indicate that low pH values are representative of background water quality in the shallow sand aquifer (G1S) and, during the April 2021 monitoring round, the pH level (6.7) was slightly below the guideline level of 7 prescribed by DWSNZ MAV. The deeper gravel aquifer (G1D) had a pH that was slightly higher at 7.1.

Dissolved iron concentrations have fluctuated considerably at both the G1S and G1D bores since monitoring began and are occasionally above the DWSNZ GV. During the April 2021 sampling round, iron concentrations at G1S (2.89 mg/L) and G1D (0.675 mg/L) exceeded the DWSNZ GV of 0.2 mg/L but were within the historical results range recorded at these bores. Elevated iron concentrations in groundwater are likely to be related to hydrogeological conditions found at the site and this phenomenon is common in groundwater in this area.

During the April 2021 sampling round, dissolved aluminium concentrations were slightly elevated at G1S (0.138 mg/L), and marginally exceeded the DWSNZ GV of 0.1 mg/L.

During the April 2021 sampling round, e-coli concentrations at F3 exceeded DWSNZ MAV with a value of 16 CFU/100ml being recorded.

During the April 2021 sampling round, the dissolved manganese concentration at Xd1 (0.5010 mg/L) exceeded the DWSNZ GV of 0.4 mg/L. Due to this being only the second result received for bore Xd1 it is too early to say if this is in keeping with historical concentrations of dissolved manganese. It is, however, similar to the March 2021 result and it is recommended this is observed closely in future reports to develop an understanding of typical concentrations.

The monitoring results suggest that the quality of background groundwater may be being impacted by local ground conditions and/or activities up-gradient of the landfill. Background bore G1S consistently records elevated concentrations of a range of parameters and therefore may not be suitable to use as a yardstick of background water quality in the future.

During the April 2021 sampling round, Toluene was detected at G1D in a concentration of 0.0005 mg/L. This is well below the ANZECC 2000 DGV guideline level.

4.3 SHALLOW AQUIFER GROUNDWATER QUALITY

4.3.1 Hydraulically Up-gradient from the Old Landfill

Sampling results from the April 2021 monitoring round show that water quality in the shallow monitoring bores hydraulically up-gradient from the old landfill complies with the discharge consent conditions.

Bores D1 and D6 are located down gradient of the new landfill, with bore D1 located hydraulically up-gradient of the leachate effluent pond and bore D6 located down gradient of the leachate pond. Other leachate indicators such as boron and chloride concentrations at D6 are all consistent with background concentrations and the historical record.

4.3.2 Irrigation Area

Sampling results from all shallow bores located hydraulically down-gradient of the irrigation area² (F series bores) are consistent with historical results and comply with the discharge consent conditions.

Historical trends with respect to the leachate indicators chloride, boron and ammoniacal nitrogen concentrations in the F-series bores are generally stable and do not show any indications of increasing trends. Boron and ammoniacal-nitrogen concentrations at F1 and F3 have consistently been low and are sometimes below the

² Irrigation of leachate within this area ceased in October 2008

laboratory detection limit. Ammoniacal-nitrogen concentrations have also been consistently low and sometimes below the laboratory detection limit at F2.

4.3.3 Hydraulically Down-gradient from the Old Landfill

During the April 2021 sampling round there were no exceedances of the resource consent conditions.

4.4 DEEP AQUIFER GROUNDWATER QUALITY

The concentration of dissolved manganese exceeded the DWSNZ MAV at C2DD (0.742 mg/L), E2D (0.409 mg/L), and Xd1 (0.5010 mg/L) within the deep gravel aquifer in the April 2021 monitoring round. However, it is noted that the manganese concentrations at C2DD and E2D are consistent with historical results and are representative of background groundwater quality in the area. The result for Xd1 is the second result for the site and therefore, it is too soon to say if it is representative since historical trends have not yet been established.

It is also noted that e-coli concentrations of 4 CFU/100ml were detected at E2D and Xd1 and exceeded the DWSNZ MAV of zero CFU/100ml.

4.5 LEACHATE EFFLUENT

Monitoring results from the leachate effluent samples are not required to meet either the ANZECC LDW trigger values or DWSNZ standards. Most of the results from the February 2021, March 2021, and April 2021 monitoring rounds were within the typical composition ranges for leachate at Class 1 landfills, as published in the WasteMINZ guidelines³. The only exception to this was for ammoniacal-nitrogen, for which the leachate concentration (1500 mg/L) marginally exceeded the typical range of 3.4 – 1440 mg/L, although this is not of concern.

4.6 TATANA PROPERTY DRAIN

Under the revised resource consent conditions approved in December 2019, monitoring location ‘SW3’ is now redesignated as ‘TD1’, and sampling at locations ‘SW2’, ‘SW3’ and ‘SW4’ has been discontinued.

Under the revised conditions, the Tatana Property drain samples are now assessed against the ANZECC AE 95% trigger values.

There was one exceedance (for Nitrate-N) of the resource consent conditions in the April 2021 sampling round. Therefore, this does not meet the conditions of the consent as the ANZECC AE (95%) limit was exceeded.

4.7 HOKIO STREAM

Under the revised resource consent conditions, a new monitoring location (HS1A), upstream of HS1, was added to the Hokio Stream monitoring sites.

Under the revised conditions, the monitoring results for the Hokio Stream samples are now assessed against the ANZECC AE 95% trigger values.

During the February 2021, March 2021, and April 2021 monitoring rounds there were fourteen exceedances of the resource consent conditions in samples from the Hokio Stream where:

- For February 2021, dissolved copper, Nitrate-N, and aluminium concentrations exceeded the ANZECC AE (95%) trigger value at all sites (HS1A (new), HS1, HS2, and HS3).
- For April 2021, the dissolved copper concentration exceeded the ANZECC AE (95%) trigger value at HS2.
- For February 2021, the dissolved zinc concentration exceeded the ANZECC AE (95%) trigger value at site HS1.

³ Technical Guidelines for Disposal to Land, WasteMINZ, 2018

4.8 CONSENT COMPLIANCE

Discharge permit 6010 states that quarterly and annual monitoring results should comply with the ANZECC LDW trigger values in the shallow groundwater aquifer (sand aquifer) and surface water bodies. Samples from the deep groundwater (gravel aquifer) should comply with the applicable DWSNZ values. Should any parameters exceed these standards, the permit holder shall report to the Regional Council as soon as practicable on the significance of the results and, where the change can be attributed to the influence of landfill leachate, consult with the Regional Council to determine if further investigations or remedial measures are required.

Shallow aquifer

There were no exceedances of the resource consent conditions during the April 2021 sampling round for samples obtained from the shallow aquifer.

Deeper gravel aquifer

There were five exceedances of the resource consent conditions in samples from the deeper gravel aquifer during the April 2021 sampling round:

- For E.Coli in bores E2D and Xd1 (both being 4 CFU/100ml, which exceeds the DWSNZ limit of Nil)
- For dissolved manganese in bores C2DD, E2D and Xd1 (being 0.742mg/L, 0.409mg/L and 0.501mg/L, respectively, which exceeds the DWSNZ MAV of 0.4mg/L).

Irrigation area

There were no exceedances of the resource consent conditions during the April 2021 sampling round for samples obtained from the irrigation area.

Tatana Property drain

There was one exceedance of the resource consent conditions in samples from Tatana Drain during the April 2021 sampling round:

The Nitrate-N concentration exceeded the ANZECC AE (95%) limit.

Hokio Stream

During the February 2021, March 2021, and April 2021 monitoring rounds, there were fourteen exceedances of the resource consent conditions in samples from the Hokio Stream where:

- For February 2021, the results for Nitrate-N for all sampling locations exceeded the ANZECC AE (95%) trigger value of 0.16mg/L.
- For February 2021, the results for dissolved aluminium for all sampling locations exceeded the ANZECC AE (95%) trigger value of 0.055mg/L.
- For February 2021, the results for dissolved copper for all sampling locations exceeded the ANZECC AE (95%) trigger value of 0.0014mg/L. Additionally, in April 2021, the results for dissolved copper at HS2 sampling location exceeded the ANZECC AE (95%) trigger value.
- In February 2021, the results for dissolved zinc at HS1 sampling location exceeded the ANZECC AE (95%) trigger value of 0.008mg/L.

5.0 CONCLUSIONS

Monitoring results obtained in the February 2021 to April 2021 sampling rounds suggest that the groundwater at the background monitoring sites is being impacted by local ground conditions and/or activities up-gradient of the landfill.

During the February 2021 – April 2021 monitoring period there were twenty exceedances of the resource consent conditions, five exceedances were in samples from the deep gravel aquifer, one exceedance occurred in the sample from Tatana Drain and fourteen exceedances occurred in samples from surface water monitoring at the Hokio Stream.

There were no exceedances in the shallow aquifer hydraulically down-gradient of the new landfill, the old landfill or of the leachate irrigation area (which has not been used since October 2008).

Leachate quality is typical of the composition of leachate recorded generally at Class 1 landfills in New Zealand.

Methane was detected in a single groundwater monitoring bore in the April sampling round. This is a substantially reduced result compared to last monitoring round.

Appendices

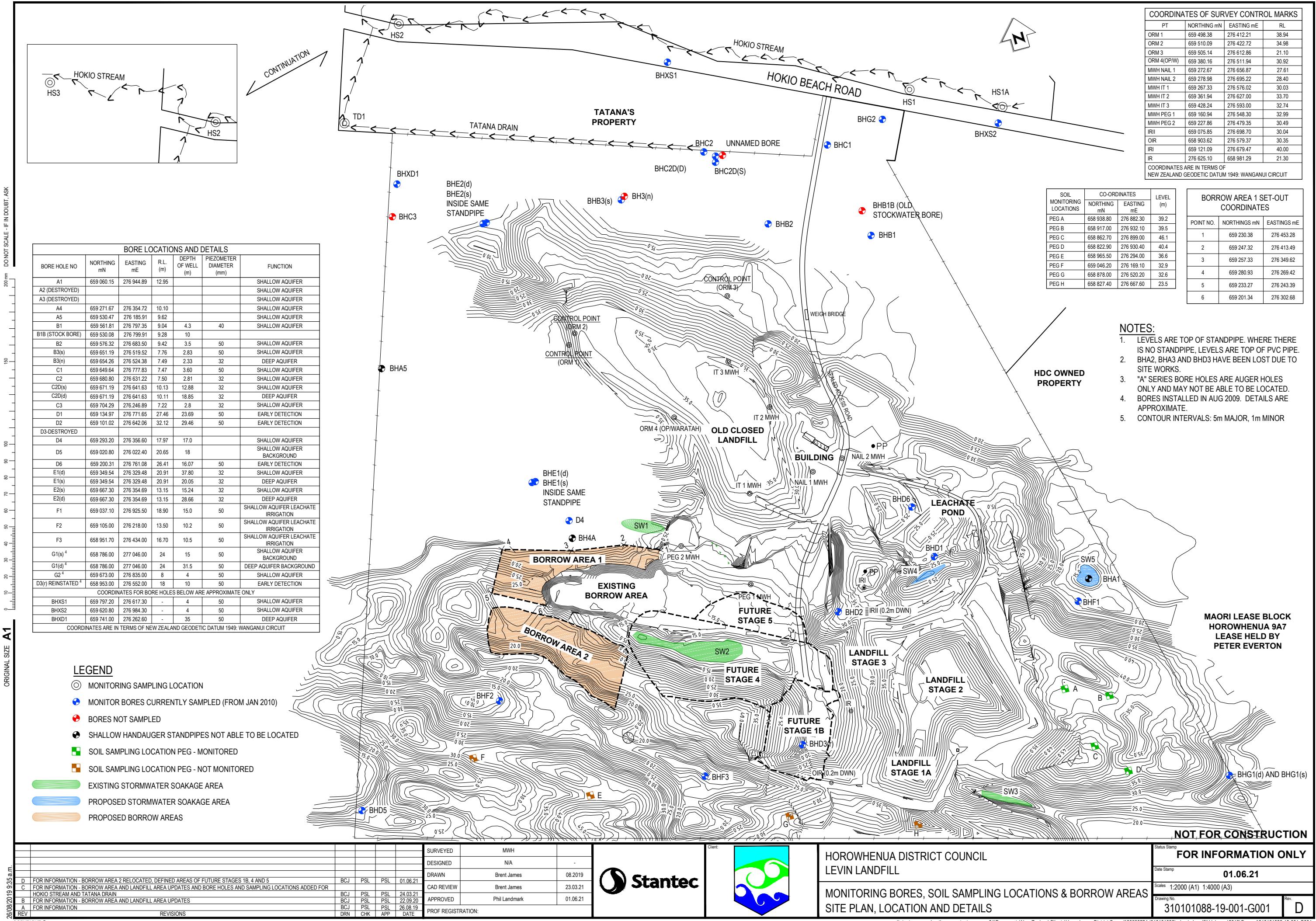
We design with community in mind



LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

APPENDIX A SITE PLAN





LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

APPENDIX B SAMPLING SCHEDULE



LEVIN LANDFILL - SUMMARY OF SURFACE AND GROUNDWATER MONITORING REQUIREMENTS (April 2020 - January 2023).

(The testing regime is based on Consent Conditions following the completion of the 2015 Resource Consent Review process).

Reports Due	Sampling Month	Table A (Condition 3, DP 6010)					Table B (Condition 3, DP 6010)																		Table C (Condition 3, DP 6010)							
		Deep Aquifer Bores					Shallow Aquifer Bores																		Hokio Stream ⁽⁴⁾				Tatana Drain	Leachate Pond ⁽⁵⁾		
Annual	Quarterly	C2dd	E1d	E2d	G1d	Xd1 ⁽¹⁾	C1	C2	C2ds	D4	B1	B2	B3s	E1s	E2s	D1 ⁽²⁾	D2 ⁽²⁾	D3r ⁽²⁾	D6 ⁽²⁾	G1s	G2s	Xs1 ⁽¹⁾	Xs2 ⁽¹⁾	D5 ⁽³⁾	F1 ⁽³⁾	F2 ⁽³⁾	F3 ⁽³⁾	HS1	HS1A	HS2	HS3	TD1
	May-20	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A		
Sep-20	Aug-20	I	I + SW	I	I	C	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	C	C	I	I	I	I + SW	I	I	
Oct-20	Nov-20	I	I + SW	I	I	C	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	C	C	I	I	I	I + SW	I	I	
Feb-21	Jan-21	I	I + SW	I	I	C	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	C	C	I	I	I	I + SW	I	I	
May-21	Apr-21	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A		
Sep-21	Aug-21	I	I + SW	I	I	C	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	C	C	I	I	I	I + SW	I	I	
Oct-21	Nov-21	I	I + SW	I	I	C	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	C	C	I	I	I	I + SW	I	I	
Feb-22	Jan-22	I	I + SW	I	I	C	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	C	C	I	I	I	I + SW	I	I	
May-22	Apr-22	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A	C + A		
Sep-22	Aug-22	I	I + SW	I	I	I	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	I	I	I	I	I + SW	I	I		
Oct-22	Nov-22	I	I + SW	I	I	I	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	I	I	I	I	I + SW	I	I		
Feb-23	Jan-23	I	I + SW	I	I	I	I	I	I	I + SW	I	I	I	I + SW	I + SW	I	I + SW	I + SW	I	I + SW	I	I + SW	I	I	I	I	I	I + SW	I	I		

Measure groundwater level and sample all bores for CH₄, CO₂ and O₂ each time that groundwater is sampled (Condition 4a of DP 6011)

Notes:

- (1) Bores to be developed by Consent Holder
- (2) See table below
- (3) If irrigation re-commences then the annual sampling is to change from comprehensive + 3 times indicator to bi-annual comprehensive + indicator (Clause D of Condition 3, DP 6010).
- (4) See table below
- (5) See table below
- C Comprehensive list (see below)
- I Indicator list (see below)
- A Pesticide and SVOC analysis
- SW Add sodium and iron analysis (for stormwater consent 102559)

A reduction in sampling frequency at any **groundwater monitoring point** is conditional on (Clauses A - D of Condition 3, DP 6010):

- A. Completion of the initial monitoring program;
- B. Good consistency of groundwater sample analysis results, or a clearly identified reason for inconsistent results that excludes the contaminant source being landfill operations, stored waste or leachate;
- C. No decline in groundwater quality as determined from indicator parameter trends over a period of four consecutive sampling rounds;
- D. If a well being monitored on a conditional frequency becomes non-compliant with condition C, the monitoring frequency for that well should return to the initial monitoring frequency until conditions B and C are again being fulfilled.

⁽²⁾ If site management planning indicates any **early detection monitoring well** is likely to become buried or otherwise destroyed within the following year as a result of normal operations (Clauses E - H, Condition 3, DP 6010):

- E. This must be communicated to the regional council;
- F. A replacement well is to be constructed in a position agreed upon with Horizons Regional Council
- G. The replacement well should be installed in a position suitable to act as a early detection well and be classed as an early detection well;
- H. The replacement well should be constructed as a nested well (or two separate wells) with screens positioned in both shallow and deep aquifers.

⁽⁴⁾ A reduction in sampling frequency at the **Hokio Stream monitoring locations (HS1A, HS2 and HS3)** is conditional on (Clauses I - L, Condition 3 of DP 6010):

- I. No significant increases in the concentrations between monitoring sites HS1A and HS3, for parameters exceeding the trigger values contained in Table C1 at Site HS3.
- J. A statistical analysis approach is to be used to determine if there is a significant increase in contaminant levels between HS1A and HS3.
- K. Following the 24 month monitoring period, there shall be no significant increases in concentrations between monitoring sites HS1A and HS3.
- L. If the Hokio Stream monitoring locations are being sampled on a conditional frequency and do not meet condition K, the monitoring frequency for all three monitoring locations (HS1A, HS2 and HS3) shall return to the base case intensive monitoring until conditions J and K are again being fulfilled.

⁽⁵⁾ A reduction in sampling frequency at the **leachate pond outlet** is conditional on (Clauses M - P, Condition 3, DP 6010):

- M. Completion of the initial 2 year monitoring program;
- N. Good consistency of water sample analysis results, or a clearly identified reason for inconsistent results;
- O. No decline in water quality over a period of four consecutive sampling rounds;
- P. If the leachate pond outlet is being sampled on a conditional frequency and becomes non-compliant with condition O, the monitoring frequency should return to the base case intensive monitoring until conditions N and O are again being fulfilled.

COMPREHENSIVE PARAMETER LIST (Table E of Condition 3, DP 6010)

Characterising parameters	pH
	electrical conductivity (EC)
	alkalinity
	total hardness
	suspended solids
Oxygen demand	COD and scBOD ₅
Nutrients*	NO ₃ -N, NH ₄ -N, DRP and SO ₄
Metals*	Al, As, Cd, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Zn and Hg
Other elements	B, Ca, Cl, K and Na
Organics	Total organic carbon, total phenols, volatile acids
Biological	E. coli

* Analyses performed for nutrients and metals are for dissolved rather than total concentrations

INDICATOR PARAMETER LIST (Table F, Condition 3, DP 6010)

Characterising parameters	pH
	electrical conductivity (EC)
Oxygen demand	COD and scBOD ₅
Nutrients*	NO ₃ -N and NH ₄ -N
Metals*	Al, Mn, Ni, Pb and Hg
Other elements	B and Cl
Biological†	E. coli

* Analyses performed for nutrients and metals are for dissolved rather than total concentrations

† E. coli added from April 2019 sampling onwards

LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

APPENDIX C ANALYTICAL RESULTS



Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/64558
Issue: 1
19 February 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/64558-01	Levin Leachate Pond		02/02/2021 00:00	03/02/2021 09:48	0
Notes: 202035-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	8.0			04/02/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	33	g/m³		03/02/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	551	g/m³		09/02/2021	Sharon van Soest KTP
0052 Alkalinity - Total	5,520	g CaCO3/m³		05/02/2021	Gordon McArthur KTP
0055 Conductivity at 25°C	1,360	mS/m		04/02/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	5,080	g/m³		04/02/2021	Marylou Cabral KTP
0180 BOD5 - Soluble Carbonaceous	79	g/m³		04/02/2021	Gordon McArthur KTP
0602 Chloride	1,050	g/m³		16/02/2021	Divina Lagazon KTP
0605 Nitrate - Nitrogen	< 0.10	g/m³		16/02/2021	Divina Lagazon KTP
0607 Sulphate	24.9	g/m³		16/02/2021	Divina Lagazon KTP
0760 Ammonia Nitrogen	1,280	g/m³		10/02/2021	Divina Lagazon KTP
1642 Total Hardness	409	g CaCO3/m³		04/02/2021	Amit Kumar KTP
1810 Calcium - Dissolved	87.0	g/m³		04/02/2021	Amit Kumar KTP
1819 Iron - Dissolved	4.26	g/m³		04/02/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	46.4	g/m³		04/02/2021	Amit Kumar KTP
1834 Sodium - Dissolved	841	g/m³		04/02/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	12.4	g/m³		10/02/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.709	g/m³		05/02/2021	Sharon van Soest KTP
6703 Arsenic - Dissolved	0.278	g/m³		05/02/2021	Sharon van Soest KTP
6707 Boron - Dissolved	6.48	g/m³		05/02/2021	Sharon van Soest KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		05/02/2021	Sharon van Soest KTP
6711 Chromium - Dissolved	0.784	g/m³		05/02/2021	Sharon van Soest KTP
6713 Copper - Dissolved	0.0080	g/m³		05/02/2021	Sharon van Soest KTP
6718 Lead - Dissolved	0.0027	g/m³		05/02/2021	Sharon van Soest KTP
6721 Manganese - Dissolved	1.17	g/m³		05/02/2021	Sharon van Soest KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		05/02/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	0.111	g/m³		05/02/2021	Sharon van Soest KTP
6726 Potassium - Dissolved	738	g/m³		09/02/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	0.054	g/m³		05/02/2021	Sharon van Soest KTP
M0104 E. coli	270	cfu/100mL		04/02/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	11 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			03/02/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/64558-1 ELS
19 February 2021 19:30:45

Test	Methodology	Detection Limit
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/64558-1 ELS
19 February 2021 19:30:45

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/64559
Issue: 1
19 February 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/64559-01	Levin HS1		02/02/2021 00:00	03/02/2021 09:41	0
Notes: 202036-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.4			04/02/2021	Marylou Cabral KTP
0002 Suspended Solids - Total	137	g/m³		03/02/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.3	g/m³		05/02/2021	Sharon van Soest KTP
0052 Alkalinity - Total	54	g CaCO3/m³		04/02/2021	Marylou Cabral KTP
0055 Conductivity at 25°C	24.3	mS/m		04/02/2021	Marylou Cabral KTP
0081 Chemical Oxygen Demand	56	g/m³		04/02/2021	Marylou Cabral KTP
0180 BOD5 - Soluble Carbonaceous	< 1	g/m³		04/02/2021	Gordon McArthur KTP
0602 Chloride	25.3	g/m³		15/02/2021	Divina Lagazon KTP
0605 Nitrate - Nitrogen	0.22	g/m³		15/02/2021	Divina Lagazon KTP
0607 Sulphate	18.2	g/m³		15/02/2021	Divina Lagazon KTP
0760 Ammonia Nitrogen	0.17	g/m³		04/02/2021	Divina Lagazon KTP
1642 Total Hardness	65	g CaCO3/m³		04/02/2021	Amit Kumar KTP
1810 Calcium - Dissolved	14.3	g/m³		04/02/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.030	g/m³		04/02/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.02	g/m³		04/02/2021	Amit Kumar KTP
1834 Sodium - Dissolved	19.7	g/m³		04/02/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.038	g/m³		04/02/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.690	g/m³		05/02/2021	Sharon van Soest KTP
6703 Arsenic - Dissolved	0.002	g/m³		05/02/2021	Sharon van Soest KTP
6707 Boron - Dissolved	0.06	g/m³		05/02/2021	Sharon van Soest KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		05/02/2021	Sharon van Soest KTP
6711 Chromium - Dissolved	< 0.001	g/m³		05/02/2021	Sharon van Soest KTP
6713 Copper - Dissolved	0.0027	g/m³		05/02/2021	Sharon van Soest KTP
6718 Lead - Dissolved	0.0023	g/m³		05/02/2021	Sharon van Soest KTP
6721 Manganese - Dissolved	0.256	g/m³		05/02/2021	Sharon van Soest KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		05/02/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	0.0007	g/m³		05/02/2021	Sharon van Soest KTP
6726 Potassium - Dissolved	3.29	g/m³		05/02/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	0.013	g/m³		05/02/2021	Sharon van Soest KTP
M0104 E. coli	120	cfu/100mL		03/02/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			03/02/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/64559-1 ELS
19 February 2021 19:30:48

Test	Methodology	Detection Limit
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/64559-1 ELS
19 February 2021 19:30:48

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/64560
Issue: 1
19 February 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/64560-01	Levin HS1A		02/02/2021 00:00	03/02/2021 09:48	0
Notes: 202037-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			04/02/2021	Marylou Cabral KTP
0002 Suspended Solids - Total	57	g/m³		03/02/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.2	g/m³		05/02/2021	Sharon van Soest KTP
0052 Alkalinity - Total	54	g CaCO3/m³		04/02/2021	Marylou Cabral KTP
0055 Conductivity at 25°C	23.9	mS/m		04/02/2021	Marylou Cabral KTP
0081 Chemical Oxygen Demand	51	g/m³		04/02/2021	Marylou Cabral KTP
0180 BOD5 - Soluble Carbonaceous	1	g/m³		04/02/2021	Gordon McArthur KTP
0602 Chloride	23.4	g/m³		15/02/2021	Amit Kumar KTP
0605 Nitrate - Nitrogen	0.20	g/m³		15/02/2021	Amit Kumar KTP
0607 Sulphate	16.5	g/m³		15/02/2021	Amit Kumar KTP
0760 Ammonia Nitrogen	0.09	g/m³		05/02/2021	Divina Lagazon KTP
1642 Total Hardness	62	g CaCO3/m³		04/02/2021	Amit Kumar KTP
1810 Calcium - Dissolved	13.4	g/m³		04/02/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.034	g/m³		04/02/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	6.86	g/m³		04/02/2021	Amit Kumar KTP
1834 Sodium - Dissolved	18.6	g/m³		04/02/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.023	g/m³		05/02/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.326	g/m³		05/02/2021	Sharon van Soest KTP
6703 Arsenic - Dissolved	0.002	g/m³		05/02/2021	Sharon van Soest KTP
6707 Boron - Dissolved	0.06	g/m³		05/02/2021	Sharon van Soest KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		05/02/2021	Sharon van Soest KTP
6711 Chromium - Dissolved	< 0.001	g/m³		05/02/2021	Sharon van Soest KTP
6713 Copper - Dissolved	0.0025	g/m³		05/02/2021	Sharon van Soest KTP
6718 Lead - Dissolved	0.0016	g/m³		05/02/2021	Sharon van Soest KTP
6721 Manganese - Dissolved	0.234	g/m³		05/02/2021	Sharon van Soest KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		05/02/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	0.0006	g/m³		05/02/2021	Sharon van Soest KTP
6726 Potassium - Dissolved	3.22	g/m³		05/02/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	0.007	g/m³		05/02/2021	Sharon van Soest KTP
M0104 E. coli	88	cfu/100mL		03/02/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			03/02/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/64560-1 ELS
19 February 2021 19:30:52

Test	Methodology	Detection Limit
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/64560-1 ELS
19 February 2021 19:30:52

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/64561
Issue: 1
19 February 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/64561-01	Levin HS2		02/02/2021 00:00	03/02/2021 09:41	0
Notes: 202038-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
0001 pH	7.5		04/02/2021	Marylou Cabral KTP	
0002 Suspended Solids - Total	52	g/m³	03/02/2021	Jennifer Mont KTP	
0040 Total (NP) Organic Carbon	7.8	g/m³	05/02/2021	Sharon van Soest KTP	
0052 Alkalinity - Total	57	g CaCO3/m³	04/02/2021	Marylou Cabral KTP	
0055 Conductivity at 25°C	24.9	mS/m	04/02/2021	Marylou Cabral KTP	
0081 Chemical Oxygen Demand	47	g/m³	04/02/2021	Marylou Cabral KTP	
0180 BOD5 - Soluble Carbonaceous	1	g/m³	04/02/2021	Gordon McArthur KTP	
0602 Chloride	25.1	g/m³	15/02/2021	Amit Kumar KTP	
0605 Nitrate - Nitrogen	0.22	g/m³	15/02/2021	Amit Kumar KTP	
0607 Sulphate	16.6	g/m³	15/02/2021	Amit Kumar KTP	
0760 Ammonia Nitrogen	0.19	g/m³	05/02/2021	Divina Lagazon KTP	
1642 Total Hardness	64	g CaCO3/m³	04/02/2021	Amit Kumar KTP	
1810 Calcium - Dissolved	13.9	g/m³	04/02/2021	Amit Kumar KTP	
1819 Iron - Dissolved	0.027	g/m³	04/02/2021	Amit Kumar KTP	
1822 Magnesium - Dissolved	7.05	g/m³	04/02/2021	Amit Kumar KTP	
1834 Sodium - Dissolved	19.5	g/m³	04/02/2021	Amit Kumar KTP	
2088 Dissolved Reactive Phosphorus	0.036	g/m³	05/02/2021	Divina Lagazon KTP	
6701 Aluminium - Dissolved	0.197	g/m³	05/02/2021	Sharon van Soest KTP	
6703 Arsenic - Dissolved	0.001	g/m³	05/02/2021	Sharon van Soest KTP	
6707 Boron - Dissolved	0.06	g/m³	05/02/2021	Sharon van Soest KTP	
6708 Cadmium - Dissolved	< 0.0002	g/m³	05/02/2021	Sharon van Soest KTP	
6711 Chromium - Dissolved	< 0.001	g/m³	05/02/2021	Sharon van Soest KTP	
6713 Copper - Dissolved	0.0018	g/m³	05/02/2021	Sharon van Soest KTP	
6718 Lead - Dissolved	0.0011	g/m³	05/02/2021	Sharon van Soest KTP	
6721 Manganese - Dissolved	0.178	g/m³	05/02/2021	Sharon van Soest KTP	
6722 Mercury - Dissolved	< 0.0005	g/m³	05/02/2021	Sharon van Soest KTP	
6724 Nickel - Dissolved	0.0006	g/m³	05/02/2021	Sharon van Soest KTP	
6726 Potassium - Dissolved	3.36	g/m³	05/02/2021	Sharon van Soest KTP	
6738 Zinc - Dissolved	0.004	g/m³	05/02/2021	Sharon van Soest KTP	
M0104 E. coli	80	cfu/100mL	03/02/2021	Sunita Raju KTP	
MO-5001 Volatile Fatty Acids	< 5 *	g/m³		Prashilla Singh Transcribed by	
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³		Prashilla Singh Transcribed by	
P1859 Sample Filtration	Completed		03/02/2021	Harsimran Dhanoa .	

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/64561-1 ELS
19 February 2021 19:30:56

Test	Methodology	Detection Limit
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/64561-1 ELS
19 February 2021 19:30:56

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/64562
Issue: 1
19 February 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/64562-01	Levin HS3		02/02/2021 00:00	03/02/2021 09:41	0
Notes: 202039-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			04/02/2021	Marylou Cabral KTP
0002 Suspended Solids - Total	54	g/m³		03/02/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.7	g/m³		05/02/2021	Sharon van Soest KTP
0052 Alkalinity - Total	59	g CaCO3/m³		04/02/2021	Marylou Cabral KTP
0055 Conductivity at 25°C	25.2	mS/m		04/02/2021	Marylou Cabral KTP
0081 Chemical Oxygen Demand	45	g/m³		04/02/2021	Marylou Cabral KTP
0180 BOD5 - Soluble Carbonaceous	< 1	g/m³		04/02/2021	Gordon McArthur KTP
0602 Chloride	29.3	g/m³		15/02/2021	Divina Lagazon KTP
0605 Nitrate - Nitrogen	0.26	g/m³		15/02/2021	Divina Lagazon KTP
0607 Sulphate	19.6	g/m³		15/02/2021	Divina Lagazon KTP
0760 Ammonia Nitrogen	0.23	g/m³		04/02/2021	Divina Lagazon KTP
1642 Total Hardness	65	g CaCO3/m³		04/02/2021	Amit Kumar KTP
1810 Calcium - Dissolved	14.6	g/m³		04/02/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.036	g/m³		04/02/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	6.95	g/m³		04/02/2021	Amit Kumar KTP
1834 Sodium - Dissolved	19.8	g/m³		04/02/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.045	g/m³		04/02/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.214	g/m³		05/02/2021	Sharon van Soest KTP
6703 Arsenic - Dissolved	0.002	g/m³		05/02/2021	Sharon van Soest KTP
6707 Boron - Dissolved	0.06	g/m³		05/02/2021	Sharon van Soest KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		05/02/2021	Sharon van Soest KTP
6711 Chromium - Dissolved	< 0.001	g/m³		05/02/2021	Sharon van Soest KTP
6713 Copper - Dissolved	0.0019	g/m³		05/02/2021	Sharon van Soest KTP
6718 Lead - Dissolved	0.0012	g/m³		05/02/2021	Sharon van Soest KTP
6721 Manganese - Dissolved	0.186	g/m³		05/02/2021	Sharon van Soest KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		05/02/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	0.0006	g/m³		05/02/2021	Sharon van Soest KTP
6726 Potassium - Dissolved	3.38	g/m³		05/02/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	0.005	g/m³		05/02/2021	Sharon van Soest KTP
M0104 E. coli	160	cfu/100mL		03/02/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			03/02/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/64562-1 ELS
19 February 2021 19:31:00

Test	Methodology	Detection Limit
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/64562-1 ELS
19 February 2021 19:31:00

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/69376
Issue: 1
17 March 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/69376-01	Levin Leachate Pond		04/03/2021 00:00	04/03/2021 15:39	0
Notes: 205150-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	8.2			05/03/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	38	g/m³		05/03/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	643	g/m³		12/03/2021	Amit Kumar KTP
0052 Alkalinity - Total	6,480	g CaCO ₃ /m³		06/03/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	1,570	mS/m		05/03/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	2,760	g/m³		05/03/2021	Gordon McArthur KTP
0180 BOD ₅ - Soluble Carbonaceous	104	g/m³		05/03/2021	Gordon McArthur KTP
0602 Chloride	1,270	g/m³		12/03/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 1.00	g/m³		12/03/2021	Shanel Kumar KTP
0607 Sulphate	44.9	g/m³		12/03/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	1,390	g/m³		10/03/2021	Divina Lagazon KTP
1642 Total Hardness	438	g CaCO ₃ /m³		10/03/2021	Amit Kumar KTP
1810 Calcium - Dissolved	89.6	g/m³		10/03/2021	Amit Kumar KTP
1819 Iron - Dissolved	4.24	g/m³		10/03/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	52.0	g/m³		10/03/2021	Amit Kumar KTP
1834 Sodium - Dissolved	1,020	g/m³		10/03/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	15.3	g/m³		10/03/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.787	g/m³		09/03/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.376	g/m³		09/03/2021	Shanel Kumar KTP
6707 Boron - Dissolved	6.32	g/m³		09/03/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	0.0100	g/m³		09/03/2021	Sharon van Soest KTP
6711 Chromium - Dissolved	0.833	g/m³		09/03/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0087	g/m³		09/03/2021	Sharon van Soest KTP
6718 Lead - Dissolved	0.0025	g/m³		09/03/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	1.22	g/m³		09/03/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		09/03/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	0.127	g/m³		09/03/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	694	g/m³		09/03/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	0.004	g/m³		09/03/2021	Sharon van Soest KTP
M0104 E. coli	< 1,000	cfu/100mL		06/03/2021	Yuemei Yu KTP
MO-5001 Volatile Fatty Acids	16 *	g/m³			Deb Bottrill Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Deb Bottrill Transcribed by
P1859 Sample Filtration	Completed			06/03/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO ₃ /m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD ₅ - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/69376-1 ELS
17 March 2021 16:00:41

Test	Methodology	Detection Limit
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/69376-1 ELS
17 March 2021 16:00:41

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/69377
Issue: 1
17 March 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/69377-01	Levin HS1		04/03/2021 00:00	04/03/2021 15:39	0
Notes: 205151-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.7			05/03/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	34	g/m³		05/03/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.1	g/m³		12/03/2021	Amit Kumar KTP
0052 Alkalinity - Total	58	g CaCO3/m³		05/03/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	24.0	mS/m		05/03/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	77	g/m³		06/03/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		05/03/2021	Gordon McArthur KTP
0602 Chloride	24.4	g/m³		10/03/2021	Divina Lagazon KTP
0605 Nitrate - Nitrogen	0.02	g/m³		10/03/2021	Divina Lagazon KTP
0607 Sulphate	14.3	g/m³		10/03/2021	Divina Lagazon KTP
0760 Ammonia Nitrogen	0.01	g/m³		08/03/2021	Divina Lagazon KTP
1642 Total Hardness	71	g CaCO3/m³		10/03/2021	Amit Kumar KTP
1810 Calcium - Dissolved	15.6	g/m³		10/03/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.035	g/m³		10/03/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.88	g/m³		10/03/2021	Amit Kumar KTP
1834 Sodium - Dissolved	24.9	g/m³		10/03/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.137	g/m³		08/03/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.015	g/m³		09/03/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.003	g/m³		09/03/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		09/03/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		09/03/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		09/03/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0010	g/m³		09/03/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0638	g/m³		09/03/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		09/03/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.40	g/m³		09/03/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	< 0.002	g/m³		09/03/2021	Sharon van Soest KTP
M0104 E. coli	400	cfu/100mL		04/03/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Deb Bottrill Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Deb Bottrill Transcribed by
P1859 Sample Filtration	Completed			05/03/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/69377-1 ELS
17 March 2021 16:00:43

Test	Methodology	Detection Limit
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/69377-1 ELS
17 March 2021 16:00:43

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/69378
Issue: 1
17 March 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
			04/03/2021 00:00	04/03/2021 15:39	0
Notes: 205152-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.7			05/03/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	33	g/m³		05/03/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.4	g/m³		12/03/2021	Amit Kumar KTP
0052 Alkalinity - Total	57	g CaCO3/m³		05/03/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	23.7	mS/m		05/03/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	62	g/m³		06/03/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		05/03/2021	Gordon McArthur KTP
0602 Chloride	27.1	g/m³		09/03/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		09/03/2021	Shanel Kumar KTP
0607 Sulphate	16.2	g/m³		09/03/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.04	g/m³		10/03/2021	Divina Lagazon KTP
1642 Total Hardness	62	g CaCO3/m³		10/03/2021	Amit Kumar KTP
1810 Calcium - Dissolved	13.5	g/m³		10/03/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.029	g/m³		10/03/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	6.95	g/m³		10/03/2021	Amit Kumar KTP
1834 Sodium - Dissolved	21.8	g/m³		10/03/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.136	g/m³		10/03/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.016	g/m³		09/03/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.003	g/m³		09/03/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		09/03/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		09/03/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		09/03/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0010	g/m³		09/03/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0443	g/m³		09/03/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		09/03/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.33	g/m³		09/03/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	< 0.002	g/m³		09/03/2021	Sharon van Soest KTP
M0104 E. coli	600	cfu/100mL		04/03/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Deb Bottrill Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Deb Bottrill Transcribed by
P1859 Sample Filtration	Completed			05/03/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/69378-1 ELS
17 March 2021 16:00:47

Test	Methodology	Detection Limit
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/69378-1 ELS
17 March 2021 16:00:47

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/69379
Issue: 1
17 March 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
			04/03/2021 00:00	04/03/2021 15:39	0
Notes: 205153-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.6			05/03/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	35	g/m³		05/03/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.6	g/m³		12/03/2021	Amit Kumar KTP
0052 Alkalinity - Total	61	g CaCO3/m³		05/03/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	25.0	mS/m		05/03/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	75	g/m³		06/03/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		05/03/2021	Gordon McArthur KTP
0602 Chloride	26.1	g/m³		10/03/2021	Divina Lagazon KTP
0605 Nitrate - Nitrogen	0.06	g/m³		10/03/2021	Divina Lagazon KTP
0607 Sulphate	14.4	g/m³		10/03/2021	Divina Lagazon KTP
0760 Ammonia Nitrogen	0.01	g/m³		10/03/2021	Divina Lagazon KTP
1642 Total Hardness	65	g CaCO3/m³		10/03/2021	Amit Kumar KTP
1810 Calcium - Dissolved	14.2	g/m³		10/03/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.035	g/m³		10/03/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.13	g/m³		10/03/2021	Amit Kumar KTP
1834 Sodium - Dissolved	22.6	g/m³		10/03/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.123	g/m³		08/03/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.005	g/m³		09/03/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.002	g/m³		09/03/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		09/03/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		09/03/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		09/03/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0009	g/m³		09/03/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0481	g/m³		09/03/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		09/03/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.26	g/m³		09/03/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	< 0.002	g/m³		09/03/2021	Sharon van Soest KTP
M0104 E. coli	310	cfu/100mL		04/03/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Deb Bottrill Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Deb Bottrill Transcribed by
P1859 Sample Filtration	Completed			05/03/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/69379-1 ELS
17 March 2021 16:00:50

Test	Methodology	Detection Limit
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/69379-1 ELS
17 March 2021 16:00:50

Downer EDI Levin - Landfill
P O Box 642
LEVIN 5540
Attention: Bruce Marshall

Analytical Report

Report Number: 20/69380
Issue: 1
17 March 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
			04/03/2021 00:00	04/03/2021 15:39	0
Notes: 205154-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.6			05/03/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	23	g/m³		05/03/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.6	g/m³		12/03/2021	Amit Kumar KTP
0052 Alkalinity - Total	62	g CaCO3/m³		05/03/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	25.3	mS/m		05/03/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	66	g/m³		06/03/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		05/03/2021	Gordon McArthur KTP
0602 Chloride	26.8	g/m³		09/03/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	0.09	g/m³		09/03/2021	Shanel Kumar KTP
0607 Sulphate	14.8	g/m³		09/03/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m³		10/03/2021	Divina Lagazon KTP
1642 Total Hardness	70	g CaCO3/m³		10/03/2021	Amit Kumar KTP
1810 Calcium - Dissolved	15.5	g/m³		10/03/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.037	g/m³		10/03/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.59	g/m³		10/03/2021	Amit Kumar KTP
1834 Sodium - Dissolved	23.6	g/m³		10/03/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.111	g/m³		10/03/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.011	g/m³		09/03/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.002	g/m³		09/03/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		09/03/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		09/03/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		09/03/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0009	g/m³		09/03/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0624	g/m³		09/03/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		09/03/2021	Sharon van Soest KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		09/03/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.39	g/m³		09/03/2021	Sharon van Soest KTP
6738 Zinc - Dissolved	< 0.002	g/m³		09/03/2021	Sharon van Soest KTP
M0104 E. coli	450	cfu/100mL		04/03/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Deb Bottrill Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Deb Bottrill Transcribed by
P1859 Sample Filtration	Completed			05/03/2021	Harsimran Dhanoa .

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m³



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 1 of 2
Report Number: 20/69380-1 ELS
17 March 2021 16:00:53

Test	Methodology	Detection Limit
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method USEPA 8270 Phenols.	0.01 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

This report may not be reproduced except in full without the written approval of this laboratory.



Report Released By
Rob Deacon



Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 2
Report Number: 20/69380-1 ELS
17 March 2021 16:00:53

**Analytical Report
Interim**

Downer EDI Levin - Landfill

Report Number: 21/5067

 P O Box 642
 LEVIN 5540
 Attention: Bruce Marshall

 Issue: 1
 01 June 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-01	Levin C2dd		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208680-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.3			14/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	187	g/m³		14/04/2021	Gordon McArthur KTP
0040 Total (NP) Organic Carbon	5.5	g/m³		14/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	200	g CaCO3/m³		14/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	55.5	mS/m		14/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	26	g/m³		14/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	41.3	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	0.04	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.31	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	166	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	42.6	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.016	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	14.4	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	39.1	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.617	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.742	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	7.57	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		14/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed				
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Harsimran Dhanoa .
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-01	Levin C2dd		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208680-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 2 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-01	Levin C2dd		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208680-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-016 Toluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-02	Levin HS3		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208711-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.6			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	40	g/m³		13/04/2021	Jennifer Mont KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 3 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-02	Levin HS3		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208711-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0040 Total (NP) Organic Carbon	9.0	g/m³		14/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	59	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	24.3	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	69	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	26.8	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	10.3	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.07	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	59	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	12.8	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.013	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	6.58	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	19.2	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.301	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0010	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0610	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.17	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	330	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-03	Levin HS2		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208710-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.8			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	49	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	9.2	g/m³		14/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	60	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	24.0	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	57	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	25.0	g/m³		14/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		14/04/2021	Shanel Kumar KTP
0607 Sulphate	10.0	g/m³		14/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.03	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	63	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	13.6	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.011	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.02	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	20.1	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.304	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.003	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0015	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0600	g/m³		15/04/2021	Shanel Kumar KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-03	Levin HS2		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208710-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	2.92	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	330	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-04	Levin HS1A		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208709-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	8.0			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	46	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	9.6	g/m³		14/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	59	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	23.0	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	51	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	23.3	g/m³		14/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		14/04/2021	Shanel Kumar KTP
0607 Sulphate	9.75	g/m³		14/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	61	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	13.1	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.011	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	6.90	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	20.0	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.308	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0012	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0575	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	2.88	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	310	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-05	Levin HS1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208708-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	8.0			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	42	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	9.6	g/m³		14/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	60	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	23.3	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	61	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	23.5	g/m³		14/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		14/04/2021	Shanel Kumar KTP
0607 Sulphate	9.83	g/m³		14/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m³		15/04/2021	Divina Lagazon KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-05	Levin HS1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208708-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
1642 Total Hardness	64	g CaCO ₃ /m ³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	13.8	g/m ³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.047	g/m ³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.19	g/m ³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	21.5	g/m ³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.306	g/m ³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.006	g/m ³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.004	g/m ³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.07	g/m ³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m ³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m ³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0017	g/m ³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m ³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0665	g/m ³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m ³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	0.0007	g/m ³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.54	g/m ³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.002	g/m ³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	350	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m ³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m ³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-06	Levin Leachate Pond		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208707-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.6			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	48	g/m ³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	741	g/m ³		14/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	6,740	g CaCO ₃ /m ³		22/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	1,620	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	4,650	g/m ³		13/04/2021	Gordon McArthur KTP
0180 BOD ₅ - Soluble Carbonaceous	149	g/m ³		14/04/2021	Gordon McArthur KTP
0602 Chloride	1,240	g/m ³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.10	g/m ³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	35.2	g/m ³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	1,500	g/m ³		19/04/2021	Divina Lagazon KTP
1642 Total Hardness	480	g CaCO ₃ /m ³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	101	g/m ³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	4.64	g/m ³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	55.4	g/m ³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	1,010	g/m ³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	14.3	g/m ³		19/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.795	g/m ³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.359	g/m ³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	6.89	g/m ³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0200	g/m ³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	0.693	g/m ³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0137	g/m ³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0500	g/m ³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	1.28	g/m ³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0500	g/m ³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	0.137	g/m ³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	803	g/m ³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.200	g/m ³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 1,000	cfu/100mL		14/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m ³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m ³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-06	Levin Leachate Pond		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208707-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
SVOC-003 a-chlordane	< 0.0002	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-005 b-BHC	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-006 cis-Permethrin	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-007 Dieldrin	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-008 Endosulfan II	<0.005	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-010 Endrin	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-011 Endrin Aldehyde	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-012 Endrin Ketone	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-013 Gamma-Chlordane	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-014 Heptachlor	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-016 Hexachlorobenzene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-017 Lindane (g-BHC)	< 0.0002	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-018 Methoxychlor	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-019 p,p'-DDD	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-020 p,p'DDE	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-021 p,p'-DDT	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-022 Procymidone	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-023 Propanil	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-024 Endosulfan I	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-025 Alachlor	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-026 Aldicarb	<0.1	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-027 Atrazine	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-028 Bromacil	<0.005	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-029 Carbofuran	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-030 Cyanazine	<0.005	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-031 d-BHC	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-032 Metalaxyl-M	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-033 Metolachlor	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-034 Metribuzin	< 0.0010	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-035 Molinate	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-037 Oxadiazon	< 0.0010	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-038 Pendimethalin	<0.002	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-039 Propazine	< 0.0010	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-040 Pyriproxyfen	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-041 Simazine	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-042 Terbutylazine	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-043 Trifluralin	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-044 Hexazinone	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-045 Chlorpyrifos	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-046 Diazinon	< 0.0005	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-047 Dimethoate	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-048 Pirimiphos methyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-049 Acenaphthene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-050 Acenaphthylene	< 0.0010	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-051 Anthracene	< 0.0010	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-052 benz(a)anthracene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-057 Chrysene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-059 Fluoranthene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-060 Fluorene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-063 Phenanthrene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-064 Pyrene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 7 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-06	Levin Leachate Pond		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208707-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-003 Benzene	0.0033	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-007 Naphthalene	0.0046	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-010 o-Xylene	0.0165	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-016 Toluene	0.0076	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-017 Total p,m Xylene, Ethylbenzene	0.0399	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 8 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-06	Levin Leachate Pond		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208707-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-07	Levin TD1		13/04/2021 00:00	14/04/2021 10:03	0
Notes: 208706-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.2			14/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	61	g/m³		14/04/2021	Gordon McArthur KTP
0040 Total (NP) Organic Carbon	25.5	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	154	g CaCO3/m³		14/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	63.1	mS/m		14/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	50	g/m³		14/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	77.3	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	3.80	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	6.26	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.04	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	137	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	26.2	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.158	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	17.3	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	57.6	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.044	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.010	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.27	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0168	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	0.0015	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	22.0	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	38	cfu/100mL		14/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			14/04/2021	Harsimran Dhanoa .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-08	Levin Xs2		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208705-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.6			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	17	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	2.7	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	58	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	21.8	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	73	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	20.8	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	0.41	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	12.8	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.02	g/m³		13/04/2021	Divina Lagazon KTP
1642 Total Hardness	54	g CaCO3/m³		20/04/2021	Amit Kumar KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-08	Levin Xs2		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208705-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
1810 Calcium - Dissolved	11.2	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.111	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	6.45	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	17.6	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.023	g/m³		13/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.007	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.04	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0008	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.106	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	3.94	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	16	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-08	Levin Xs2		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208705-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-016 Toluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 11 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-08	Levin Xs2		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208705-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-09	Levin Xs1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208704-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.7			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	43	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	24.8	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	513	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	139	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	75	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	112	g/m³		14/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.10	g/m³		14/04/2021	Shanel Kumar KTP
0607 Sulphate	3.09	g/m³		14/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	3.20	g/m³		13/04/2021	Divina Lagazon KTP
1642 Total Hardness	435	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	90.3	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	16.4	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	50.9	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	92.4	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.093	g/m³		13/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.59	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.831	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-09	Levin Xs1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208704-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6724 Nickel - Dissolved	0.0024	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	23.5	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		14/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 13 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-09	Levin Xs1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208704-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-016 Toluene	0.0009	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 14 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-09	Levin Xs1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208704-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-10	Levin F3		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208703-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
0001 pH	7.0		14/04/2021	Jennifer Mont KTP	
0002 Suspended Solids - Total	< 5	g/m³	14/04/2021	Gordon McArthur KTP	
0040 Total (NP) Organic Carbon	1.5	g/m³	15/04/2021	Amit Kumar KTP	
0052 Alkalinity - Total	43	g CaCO3/m³	14/04/2021	Jennifer Mont KTP	
0055 Conductivity at 25°C	19.2	mS/m	14/04/2021	Jennifer Mont KTP	
0081 Chemical Oxygen Demand	< 15	g/m³	14/04/2021	Gordon McArthur KTP	
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³	14/04/2021	Gordon McArthur KTP	
0602 Chloride	17.4	g/m³	15/04/2021	Shanel Kumar KTP	
0605 Nitrate - Nitrogen	1.53	g/m³	15/04/2021	Shanel Kumar KTP	
0607 Sulphate	8.39	g/m³	15/04/2021	Shanel Kumar KTP	
0760 Ammonia Nitrogen	< 0.01	g/m³	15/04/2021	Divina Lagazon KTP	
1642 Total Hardness	33	g CaCO3/m³	20/04/2021	Amit Kumar KTP	
1810 Calcium - Dissolved	4.84	g/m³	20/04/2021	Amit Kumar KTP	
1819 Iron - Dissolved	< 0.005	g/m³	20/04/2021	Amit Kumar KTP	
1822 Magnesium - Dissolved	4.99	g/m³	20/04/2021	Amit Kumar KTP	
1834 Sodium - Dissolved	22.0	g/m³	20/04/2021	Amit Kumar KTP	
2088 Dissolved Reactive Phosphorus	0.136	g/m³	15/04/2021	Divina Lagazon KTP	
6701 Aluminium - Dissolved	< 0.002	g/m³	15/04/2021	Shanel Kumar KTP	
6703 Arsenic - Dissolved	0.002	g/m³	15/04/2021	Shanel Kumar KTP	
6707 Boron - Dissolved	< 0.03	g/m³	15/04/2021	Shanel Kumar KTP	
6708 Cadmium - Dissolved	< 0.0002	g/m³	15/04/2021	Shanel Kumar KTP	
6711 Chromium - Dissolved	< 0.001	g/m³	15/04/2021	Shanel Kumar KTP	
6713 Copper - Dissolved	0.0007	g/m³	15/04/2021	Shanel Kumar KTP	
6718 Lead - Dissolved	< 0.0005	g/m³	15/04/2021	Shanel Kumar KTP	
6721 Manganese - Dissolved	< 0.0005	g/m³	15/04/2021	Shanel Kumar KTP	
6722 Mercury - Dissolved	< 0.0005	g/m³	15/04/2021	Shanel Kumar KTP	
6724 Nickel - Dissolved	< 0.0005	g/m³	15/04/2021	Shanel Kumar KTP	
6726 Potassium - Dissolved	4.93	g/m³	15/04/2021	Shanel Kumar KTP	
6738 Zinc - Dissolved	< 0.002	g/m³	15/04/2021	Shanel Kumar KTP	
M0104 E. coli	16	cfu/100mL	14/04/2021	Maria Norris KTP	
MO-5001 Volatile Fatty Acids	< 5 *	g/m³		Prashilla Singh Transcribed by	
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³		Prashilla Singh Transcribed by	
P1859 Sample Filtration	Completed		14/04/2021	Harsimran Dhanoa .	
SVOC-001 2,3-Diuron	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-002 a-BHC	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-003 a-chlordane	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-004 Aldrin	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-005 b-BHC	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 15 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-10	Levin F3		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208703-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlорpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 16 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-10	Levin F3		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208703-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L	14/04/2021	Joanna Yang KTP	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-003 Benzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-007 Naphthalene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-010 o-Xylene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-014 Styrene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-016 Toluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 17 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-10	Levin F3		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208703-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-062 Bromodichloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-11	Levin F2		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208702-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.0			14/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 5	g/m³		14/04/2021	Gordon McArthur KTP
0040 Total (NP) Organic Carbon	1.6	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	51	g CaCO3/m³		14/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	21.3	mS/m		14/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	17	g/m³		14/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	22.3	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	0.18	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	9.49	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	38	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	5.81	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.015	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	5.59	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	26.3	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.132	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.04	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0010	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0139	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	5.22	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		14/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			14/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 18 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-11	Levin F2		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208702-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazaine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 19 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-11	Levin F2		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208702-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-016 Toluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-12	Levin F1		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208701-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.9			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	5.1	g/m³		15/04/2021	Amit Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 20 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-12	Levin F1		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208701-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0052 Alkalinity - Total	113	g CaCO ₃ /m ³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	48.5	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	26	g/m ³		14/04/2021	Gordon McArthur KTP
0180 BOD ₅ - Soluble Carbonaceous	< 3	g/m ³		14/04/2021	Gordon McArthur KTP
0602 Chloride	61.0	g/m ³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	2.02	g/m ³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	7.59	g/m ³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m ³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	130	g CaCO ₃ /m ³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	19.0	g/m ³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	< 0.005	g/m ³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	19.9	g/m ³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	41.9	g/m ³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.155	g/m ³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m ³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.002	g/m ³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.03	g/m ³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m ³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m ³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0013	g/m ³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m ³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0038	g/m ³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m ³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m ³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	9.18	g/m ³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m ³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	27	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m ³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m ³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed				
SVOC-001 2,3-Diuron	<0.001	mg/L		13/04/2021	Freddie Badraun .
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 21 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-12	Levin F1		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208701-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	0.0007	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 22 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-12	Levin F1		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208701-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-025	1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-026	1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-027	1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-028	1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-029	1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-030	1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-031	2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-032	Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-033	Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-034	Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-035	Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-036	Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-037	Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-038	cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-039	cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-040	Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-041	Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-042	Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-043	Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-044	Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-045	trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-046	trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-047	Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-048	Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-049	Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-053	1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-054	1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-055	2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-057	Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-058	Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-061	Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-062	Bromodichloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-063	Bromoform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-064	Chloroform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-065	Dibromochloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-13	Levin D5		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208700-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001	pH	7.0		13/04/2021	Jennifer Mont KTP
0002	Suspended Solids - Total	< 4	g/m³	13/04/2021	Jennifer Mont KTP
0040	Total (NP) Organic Carbon	1.9	g/m³	15/04/2021	Amit Kumar KTP
0052	Alkalinity - Total	62	g CaCO3/m³	13/04/2021	Jennifer Mont KTP
0055	Conductivity at 25°C	29.4	mS/m	13/04/2021	Jennifer Mont KTP
0081	Chemical Oxygen Demand	< 15	g/m³	14/04/2021	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous	< 3	g/m³	14/04/2021	Gordon McArthur KTP
0602	Chloride	26.7	g/m³	15/04/2021	Shanel Kumar KTP
0605	Nitrate - Nitrogen	1.73	g/m³	15/04/2021	Shanel Kumar KTP
0607	Sulphate	16.0	g/m³	15/04/2021	Shanel Kumar KTP
0760	Ammonia Nitrogen	< 0.01	g/m³	15/04/2021	Divina Lagazon KTP
1642	Total Hardness	61	g CaCO3/m³	20/04/2021	Amit Kumar KTP
1810	Calcium - Dissolved	10.3	g/m³	20/04/2021	Amit Kumar KTP
1819	Iron - Dissolved	0.033	g/m³	20/04/2021	Amit Kumar KTP
1822	Magnesium - Dissolved	8.61	g/m³	20/04/2021	Amit Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 23 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-13	Levin D5		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208700-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
1834 Sodium - Dissolved	28.3	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.104	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.03	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0006	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0095	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	7.00	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 24 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-13	Levin D5		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208700-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlорpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	0.0006	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 25 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-13	Levin D5		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208700-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-14	Levin G2s		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208699-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.8			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	1.4	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	276	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	133	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	66	g/m³		14/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	227	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.10	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	5.51	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.02	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	237	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	44.3	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.169	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	30.6	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	156	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.017	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.003	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	1.02	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0065	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.160	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	0.0034	g/m³		15/04/2021	Shanel Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 26 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-14	Levin G2s		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208699-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6726 Potassium - Dissolved	18.0	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k)	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 27 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-14	Levin G2s		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208699-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
fluoranthrene					
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-057 Chrysene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-059 Fluoranthene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-060 Fluorene	< 0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-062 Naphthalene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-063 Phenanthrene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-064 Pyrene	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L	14/04/2021	Joanna Yang KTP	
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L	14/04/2021	Joanna Yang KTP	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-003 Benzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-007 Naphthalene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-010 o-Xylene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-014 Styrene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-016 Toluene	0.0009	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 28 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-14	Levin G2s		13/04/2021 00:00	14/04/2021 09:47	0
Notes: 208699-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-049	Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-053	1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-054	1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-055	2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-057	Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-058	Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-061	Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-062	Bromodichloromethane	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-063	Bromoform	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-064	Chloroform	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-065	Dibromochloromethane	< 0.0005	mg/L	20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-15	Levin G1S		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208698-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001	pH	6.7		13/04/2021	Jennifer Mont KTP
0002	Suspended Solids - Total	49	g/m³	13/04/2021	Jennifer Mont KTP
0040	Total (NP) Organic Carbon	32.4	g/m³	16/04/2021	Amit Kumar KTP
0052	Alkalinity - Total	69	g CaCO3/m³	13/04/2021	Jennifer Mont KTP
0055	Conductivity at 25°C	39.6	mS/m	13/04/2021	Jennifer Mont KTP
0081	Chemical Oxygen Demand	91	g/m³	13/04/2021	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous	< 6	g/m³	14/04/2021	Gordon McArthur KTP
0602	Chloride	66.3	g/m³	14/04/2021	Shanel Kumar KTP
0605	Nitrate - Nitrogen	0.03	g/m³	14/04/2021	Shanel Kumar KTP
0607	Sulphate	6.27	g/m³	14/04/2021	Shanel Kumar KTP
0760	Ammonia Nitrogen	0.05	g/m³	15/04/2021	Divina Lagazon KTP
1642	Total Hardness	41	g CaCO3/m³	20/04/2021	Amit Kumar KTP
1810	Calcium - Dissolved	7.56	g/m³	20/04/2021	Amit Kumar KTP
1819	Iron - Dissolved	2.89	g/m³	20/04/2021	Amit Kumar KTP
1822	Magnesium - Dissolved	5.34	g/m³	20/04/2021	Amit Kumar KTP
1834	Sodium - Dissolved	69.6	g/m³	20/04/2021	Amit Kumar KTP
2088	Dissolved Reactive Phosphorus	0.071	g/m³	15/04/2021	Divina Lagazon KTP
6701	Aluminium - Dissolved	0.138	g/m³	15/04/2021	Shanel Kumar KTP
6703	Arsenic - Dissolved	0.002	g/m³	15/04/2021	Shanel Kumar KTP
6707	Boron - Dissolved	< 0.03	g/m³	15/04/2021	Shanel Kumar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³	15/04/2021	Shanel Kumar KTP
6711	Chromium - Dissolved	0.002	g/m³	15/04/2021	Shanel Kumar KTP
6713	Copper - Dissolved	0.0080	g/m³	15/04/2021	Shanel Kumar KTP
6718	Lead - Dissolved	< 0.0005	g/m³	15/04/2021	Shanel Kumar KTP
6721	Manganese - Dissolved	0.0461	g/m³	15/04/2021	Shanel Kumar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³	15/04/2021	Shanel Kumar KTP
6724	Nickel - Dissolved	0.0016	g/m³	15/04/2021	Shanel Kumar KTP
6726	Potassium - Dissolved	3.93	g/m³	15/04/2021	Shanel Kumar KTP
6738	Zinc - Dissolved	< 0.002	g/m³	15/04/2021	Shanel Kumar KTP
M0104	E. coli	< 4	cfu/100mL	13/04/2021	Sunita Raju KTP
MO-5001	Volatile Fatty Acids	Not Available *	g/m³		
MO-5002	Total Halogenated Phenolics	Not Available	g/m³		
P1859	Sample Filtration	Completed			
SVOC-001	2,3-Diuron	<0.001	mg/L	14/04/2021	Joanna Yang KTP
SVOC-002	a-BHC	<0.0001	mg/L	14/04/2021	Joanna Yang KTP
SVOC-003	a-chlordane	<0.0001	mg/L	14/04/2021	Joanna Yang KTP
SVOC-004	Aldrin	<0.001	mg/L	14/04/2021	Joanna Yang KTP
SVOC-005	b-BHC	<0.0001	mg/L	14/04/2021	Joanna Yang KTP
SVOC-006	cis-Permethrin	<0.0001	mg/L	14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 29 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-15	Levin G1S		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208698-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 30 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-15	Levin G1S		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208698-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl 00001	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-016 Toluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 31 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-15	Levin G1S		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208698-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-063 Bromoform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-16	Levin D6		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208697-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.9			15/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		15/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	1.2	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	69	g CaCO3/m³		15/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	37.5	mS/m		15/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	< 15	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 1	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	17.4	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	16.6	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	28.1	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	97	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	17.8	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	0.020	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	12.8	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	30.8	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.098	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.001	g/m³		16/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.05	g/m³		16/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		16/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0006	g/m³		16/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0018	g/m³		16/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	8.89	g/m³		16/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.002	g/m³		16/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed				
SVOC-001 2,3-Diuron	<0.001	mg/L		15/04/2021	Harsimran Dhanoa .
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 32 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-16	Levin D6		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208697-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlorypyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 33 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-16	Levin D6		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208697-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-016 Toluene	0.0008	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-17	Levin D3r		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208696-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
0001 pH	6.8		15/04/2021	Jennifer Mont KTP	
0002 Suspended Solids - Total	< 6	g/m³	15/04/2021	Jennifer Mont KTP	
0040 Total (NP) Organic Carbon	3.0	g/m³	15/04/2021	Amit Kumar KTP	
0052 Alkalinity - Total	55	g CaCO3/m³	15/04/2021	Jennifer Mont KTP	
0055 Conductivity at 25°C	22.3	mS/m	15/04/2021	Jennifer Mont KTP	
0081 Chemical Oxygen Demand	19	g/m³	16/04/2021	Gordon McArthur KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 34 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-17	Levin D3r		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208696-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	20.9	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	0.17	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	9.86	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.15	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	36	g CaCO ₃ /m³		06/05/2021	Shuyu Zhao KTP
1810 Calcium - Dissolved	7.07	g/m³		06/05/2021	Shuyu Zhao KTP
1819 Iron - Dissolved	2.89	g/m³		06/05/2021	Shuyu Zhao KTP
1822 Magnesium - Dissolved	4.44	g/m³		06/05/2021	Shuyu Zhao KTP
1834 Sodium - Dissolved	24.8	g/m³		06/05/2021	Shuyu Zhao KTP
2088 Dissolved Reactive Phosphorus	0.017	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.007	g/m³		16/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.03	g/m³		16/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		16/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.177	g/m³		16/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	5.54	g/m³		16/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'-DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 35 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-17	Levin D3r		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208696-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlорpyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	0.0006	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 36 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-17	Levin D3r		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208696-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-030	1,3-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-031	2,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-032	Allyl chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-033	Bromochloromethane	<0.0012	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-034	Bromomethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-035	Carbon tetrachloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-036	Chloroethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-037	Chloromethane	<0.006	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-038	cis-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-039	cis-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-040	Dibromomethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-041	Dichlorodifluoromethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-042	Dichloromethane	<0.005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-043	Hexachlorobutadiene	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-044	Tetrachloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-045	trans-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-046	trans-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-047	Trichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-048	Trichlorofluoromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-049	Vinyl Chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-053	1,3-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-054	1,4-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-055	2-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-057	Bromobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-058	Chlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-061	Carbon disulphide	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-062	Bromodichloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-063	Bromoform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-064	Chloroform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP
VOC-065	Dibromochloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-18	Levin D2		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208695-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001	pH	6.5		15/04/2021	Jennifer Mont KTP
0002	Suspended Solids - Total	10	g/m³	15/04/2021	Jennifer Mont KTP
0040	Total (NP) Organic Carbon	11.7	g/m³	15/04/2021	Amit Kumar KTP
0052	Alkalinity - Total	134	g CaCO3/m³	15/04/2021	Jennifer Mont KTP
0055	Conductivity at 25°C	40.2	mS/m	15/04/2021	Jennifer Mont KTP
0081	Chemical Oxygen Demand	38	g/m³	16/04/2021	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous	< 6	g/m³	15/04/2021	Marylou Cabral KTP
0602	Chloride	33.0	g/m³	19/04/2021	Shanel Kumar KTP
0605	Nitrate - Nitrogen	< 0.01	g/m³	19/04/2021	Shanel Kumar KTP
0607	Sulphate	< 0.02	g/m³	19/04/2021	Shanel Kumar KTP
0760	Ammonia Nitrogen	0.51	g/m³	21/04/2021	Divina Lagazon KTP
1642	Total Hardness	100	g CaCO3/m³	16/04/2021	Shanel Kumar KTP
1810	Calcium - Dissolved	17.6	g/m³	16/04/2021	Shanel Kumar KTP
1819	Iron - Dissolved	3.95	g/m³	16/04/2021	Shanel Kumar KTP
1822	Magnesium - Dissolved	13.7	g/m³	16/04/2021	Shanel Kumar KTP
1834	Sodium - Dissolved	31.4	g/m³	16/04/2021	Shanel Kumar KTP
2088	Dissolved Reactive Phosphorus	0.036	g/m³	21/04/2021	Divina Lagazon KTP
6701	Aluminium - Dissolved	0.004	g/m³	16/04/2021	Shanel Kumar KTP
6703	Arsenic - Dissolved	< 0.001	g/m³	16/04/2021	Shanel Kumar KTP
6707	Boron - Dissolved	0.05	g/m³	16/04/2021	Shanel Kumar KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-18	Levin D2		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208695-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		16/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.362	g/m³		16/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	9.73	g/m³		16/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.005	g/m³		16/04/2021	Shanel Kumar KTP
M0104 E. coli	8	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenapthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 38 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-18	Levin D2		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208695-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-050 Acenaphthylene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-040 Dibromomethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-042 Dichloromethane	<0.005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		20/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 39 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-18	Levin D2		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208695-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-044 Tetrachloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-19	Levin D1		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208694-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.7			15/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		15/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	1.3	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	133	g CaCO3/m³		15/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	48.4	mS/m		15/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	21	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 1	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	27.2	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	9.44	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	5.07	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	< 0.01	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	139	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	25.9	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	< 0.005	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	18.0	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	43.2	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.100	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.001	g/m³		16/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.05	g/m³		16/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		16/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	0.0011	g/m³		16/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	10.7	g/m³		16/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 40 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-19	Levin D1		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208694-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 41 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-19	Levin D1		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208694-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
SVOC-064 Pyrene	<0.0001	mg/L	22/04/2021	Joanna Yang KTP	
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.001	mg/L	22/04/2021	Joanna Yang KTP	
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L	22/04/2021	Joanna Yang KTP	
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L	22/04/2021	Joanna Yang KTP	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L	22/04/2021	Joanna Yang KTP	
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L	22/04/2021	Joanna Yang KTP	
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L	22/04/2021	Joanna Yang KTP	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-003 Benzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-007 Naphthalene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-010 o-Xylene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-014 Styrene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-016 Toluene	0.0012	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-034 Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-036 Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-037 Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-042 Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iiancko KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 42 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-19	Levin D1		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208694-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-058 Chlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		20/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-20	Levin E2s		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208693-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.7			15/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		15/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	3.3	g/m³		16/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	85	g CaCO3/m³		15/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	35.5	mS/m		15/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	16	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	39.4	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	14.1	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.33	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	101	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	29.6	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	0.064	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	6.68	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	26.8	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.238	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	< 0.03	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.237	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	5.62	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-20	Levin E2s		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208693-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Ilancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 44 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-20	Levin E2s		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208693-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-010 o-Xylene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-014 Styrene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-016 Toluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-21	Levin E1s		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208692-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
0001 pH	6.9		15/04/2021	Jennifer Mont	KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-21	Levin E1s		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208692-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0002 Suspended Solids - Total	5	g/m³		15/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	6.4	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	70	g CaCO3/m³		15/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	26.7	mS/m		15/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	25	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	26.1	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	5.37	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.18	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	59	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	11.6	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	1.96	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	7.19	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	26.0	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.059	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.004	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	< 0.03	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.239	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	5.95	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed				
SVOC-001 2,3-Diuron	<0.001	mg/L		15/04/2021	Harsimran Dhanoa .
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 46 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-21	Levin E1s		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208692-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0010	mg/L		22/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		20/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 47 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-21	Levin E1s		14/04/2021 00:00	15/04/2021 11:35	0
Notes: 208692-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-025	1,2,3-Trichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-026	1,2-Dibromo-3-chloropropane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-027	1,2-Dibromoethane	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-028	1,2-Dichloroethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-029	1,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-030	1,3-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-031	2,2-Dichloropropane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-032	Allyl chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-033	Bromochloromethane	<0.0012	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-034	Bromomethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-035	Carbon tetrachloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-036	Chloroethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-037	Chloromethane	<0.006	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-038	cis-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-039	cis-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-040	Dibromomethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-041	Dichlorodifluoromethane	<0.001	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-042	Dichloromethane	<0.005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-043	Hexachlorobutadiene	<0.0002	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-044	Tetrachloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-045	trans-1,2-Dichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-046	trans-1,3-Dichloropropene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-047	Trichloroethene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-048	Trichlorofluoromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-049	Vinyl Chloride	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-053	1,3-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-054	1,4-Dichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-055	2-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-057	Bromobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-058	Chlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-061	Carbon disulphide	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-062	Bromodichloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-063	Bromoform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-064	Chloroform	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP
VOC-065	Dibromochloromethane	<0.0005	mg/L	20/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-22	Levin B3s		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208691-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001	pH	7.1		16/04/2021	Jennifer Mont KTP
0002	Suspended Solids - Total	81	g/m³	16/04/2021	Jennifer Mont KTP
0040	Total (NP) Organic Carbon	61.6	g/m³	20/04/2021	Amit Kumar KTP
0052	Alkalinity - Total	1,070	g CaCO3/m³	22/04/2021	Jennifer Mont KTP
0055	Conductivity at 25°C	265	mS/m	16/04/2021	Jennifer Mont KTP
0081	Chemical Oxygen Demand	100	g/m³	16/04/2021	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous	< 6	g/m³	16/04/2021	Marylou Cabral KTP
0602	Chloride	166	g/m³	19/04/2021	Shanel Kumar KTP
0605	Nitrate - Nitrogen	< 0.10	g/m³	19/04/2021	Shanel Kumar KTP
0607	Sulphate	0.04	g/m³	19/04/2021	Shanel Kumar KTP
0760	Ammonia Nitrogen	177	g/m³	20/04/2021	Divina Lagazon KTP
1642	Total Hardness	300	g CaCO3/m³	04/05/2021	Amit Kumar KTP
1810	Calcium - Dissolved	58.5	g/m³	04/05/2021	Amit Kumar KTP
1819	Iron - Dissolved	0.393	g/m³	04/05/2021	Amit Kumar KTP
1822	Magnesium - Dissolved	37.2	g/m³	04/05/2021	Amit Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 48 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-22	Levin B3s		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208691-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
1834 Sodium - Dissolved	127	g/m³		04/05/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.034	g/m³		20/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.005	g/m³		16/04/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	0.022	g/m³		16/04/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	1.00	g/m³		16/04/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	0.004	g/m³		16/04/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0091	g/m³		16/04/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	2.65	g/m³		16/04/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	0.0098	g/m³		16/04/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	104	g/m³		16/04/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	< 0.002	g/m³		16/04/2021	Shuyu Zhao KTP
M0104 E. coli	68	cfu/100mL		16/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			16/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		23/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		23/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		23/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 49 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-22	Levin B3s		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208691-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-045 Chlorpyrifos	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	0.0007	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 50 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-22	Levin B3s		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208691-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-23	Levin B2		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208690-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.7			16/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	29	g/m³		16/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	36.4	g/m³		20/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	783	g CaCO3/m³		16/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	218	mS/m		16/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	111	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		16/04/2021	Marylou Cabral KTP
0602 Chloride	134	g/m³		19/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	17.0	g/m³		19/04/2021	Shanel Kumar KTP
0607 Sulphate	3.22	g/m³		19/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	77.5	g/m³		22/04/2021	Divina Lagazon KTP
1642 Total Hardness	538	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	122	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	0.315	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	56.3	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	105	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.025	g/m³		22/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.004	g/m³		16/04/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	0.004	g/m³		16/04/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	2.37	g/m³		16/04/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	0.001	g/m³		16/04/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0025	g/m³		16/04/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	3.16	g/m³		16/04/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	0.0031	g/m³		16/04/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	61.4	g/m³		16/04/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	0.003	g/m³		16/04/2021	Shuyu Zhao KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-23	Levin B2		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208690-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
M0104 E. coli	< 4	cfu/100mL		16/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			16/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		23/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		23/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 52 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-23	Levin B2		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208690-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-059 Fluoranthene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 53 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-23	Levin B2		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208690-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	< 0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	< 0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	< 0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-24	Levin B1		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208689-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.5			16/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 6	g/m³		16/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	30.1	g/m³		20/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	681	g CaCO3/m³		16/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	241	mS/m		16/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	118	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		16/04/2021	Marylou Cabral KTP
0602 Chloride	339	g/m³		20/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	4.36	g/m³		20/04/2021	Shanel Kumar KTP
0607 Sulphate	3.20	g/m³		19/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	14.3	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	578	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	112	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	0.047	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	72.6	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	216	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.115	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.005	g/m³		16/04/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	0.001	g/m³		16/04/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	1.47	g/m³		16/04/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	0.001	g/m³		16/04/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0116	g/m³		16/04/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	12.6	g/m³		22/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	0.0056	g/m³		16/04/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	25.6	g/m³		16/04/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	0.006	g/m³		16/04/2021	Shuyu Zhao KTP
M0104 E. coli	4	cfu/100mL		16/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			16/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-24	Levin B1		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208689-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-011 Endrin Aldehyde	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-020 p,p'-DDE	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		23/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		23/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Ilancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Ilancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 55 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-24	Levin B1		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208689-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-003 Benzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-007 Naphthalene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-010 o-Xylene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-014 Styrene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-016 Toluene	0.0008	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-25	Levin D4		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208688-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.0			15/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		15/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	3.5	g/m³		16/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	65	g CaCO3/m³		15/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	30.6	mS/m		15/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	< 15	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	36.4	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	11.8	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.24	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	60	g CaCO3/m³		16/04/2021	Shanel Kumar KTP
1810 Calcium - Dissolved	11.6	g/m³		16/04/2021	Shanel Kumar KTP
1819 Iron - Dissolved	1.54	g/m³		16/04/2021	Shanel Kumar KTP
1822 Magnesium - Dissolved	7.67	g/m³		16/04/2021	Shanel Kumar KTP
1834 Sodium - Dissolved	29.2	g/m³		16/04/2021	Shanel Kumar KTP
2088 Dissolved Reactive Phosphorus	0.021	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.003	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	< 0.03	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.209	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	6.09	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		23/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		23/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 57 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-25	Levin D4		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208688-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
SVOC-029 Carbofuran	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-030 Cyanazine	<0.005	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-031 d-BHC	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-032 Metalaxyl-M	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-033 Metolachlor	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-034 Metribuzin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-035 Molinate	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-037 Oxadiazon	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-038 Pendimethalin	<0.002	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-039 Propazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-040 Pyriproxyfen	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-041 Simazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-042 Terbutylazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-043 Trifluralin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-044 Hexazinone	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-045 Chlorpyrifos	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-046 Diazinon	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-047 Dimethoate	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-048 Pirimiphos methyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-049 Acenaphthene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-050 Acenaphthylene	< 0.0010	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-051 Anthracene	< 0.0010	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-052 benz(a)anthracene	< 0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-057 Chrysene	< 0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-059 Fluoranthene	< 0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-060 Fluorene	< 0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-062 Naphthalene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-063 Phenanthrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-064 Pyrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L	23/04/2021	Joanna Yang KTP	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-003 Benzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-007 Naphthalene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-010 o-Xylene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-014 Styrene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-016 Toluene	0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iiancko KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 58 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-25	Levin D4		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208688-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-26	Levin C2ds		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208687-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	6.8			16/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	95	g/m³		16/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	26.2	g/m³		16/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	464	g CaCO3/m³		16/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	117	mS/m		16/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	82	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		16/04/2021	Marylou Cabral KTP
0602 Chloride	81.2	g/m³		19/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.10	g/m³		20/04/2021	Shanel Kumar KTP
0607 Sulphate	< 0.02	g/m³		19/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	1.33	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	406	g CaCO3/m³		06/05/2021	Shuyu Zhao KTP
1810 Calcium - Dissolved	108	g/m³		06/05/2021	Shuyu Zhao KTP
1819 Iron - Dissolved	2.61	g/m³		06/05/2021	Shuyu Zhao KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-26	Levin C2ds		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208687-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
1822 Magnesium - Dissolved	33.2	g/m³		06/05/2021	Shuyu Zhao KTP
1834 Sodium - Dissolved	99.6	g/m³		06/05/2021	Shuyu Zhao KTP
2088 Dissolved Reactive Phosphorus	0.025	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		16/04/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	0.002	g/m³		16/04/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	0.85	g/m³		16/04/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	< 0.001	g/m³		16/04/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	1.76	g/m³		16/04/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	0.0022	g/m³		16/04/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	12.3	g/m³		16/04/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	< 0.002	g/m³		16/04/2021	Shuyu Zhao KTP
M0104 E. coli	< 4	cfu/100mL		16/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			16/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		23/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		23/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 60 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-26	Levin C2ds		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208687-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-044 Hexazinone	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-045 Chlорpyrifos	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 61 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-26	Levin C2ds		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208687-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-27	Levin C2		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208686-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
0001 pH	7.0		15/04/2021	Jennifer Mont KTP	
0002 Suspended Solids - Total	111	g/m³	15/04/2021	Jennifer Mont KTP	
0040 Total (NP) Organic Carbon	45.2	g/m³	16/04/2021	Amit Kumar KTP	
0052 Alkalinity - Total	871	g CaCO3/m³	15/04/2021	Jennifer Mont KTP	
0055 Conductivity at 25°C	263	mS/m	15/04/2021	Jennifer Mont KTP	
0081 Chemical Oxygen Demand	175	g/m³	16/04/2021	Gordon McArthur KTP	
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³	15/04/2021	Marylou Cabral KTP	
0602 Chloride	215	g/m³	16/04/2021	Shanel Kumar KTP	
0605 Nitrate - Nitrogen	0.19	g/m³	16/04/2021	Shanel Kumar KTP	
0607 Sulphate	6.58	g/m³	16/04/2021	Shanel Kumar KTP	
0760 Ammonia Nitrogen	149	g/m³	21/04/2021	Divina Lagazon KTP	
1642 Total Hardness	227	g CaCO3/m³	04/05/2021	Amit Kumar KTP	
1810 Calcium - Dissolved	47.6	g/m³	04/05/2021	Amit Kumar KTP	
1819 Iron - Dissolved	0.719	g/m³	04/05/2021	Amit Kumar KTP	
1822 Magnesium - Dissolved	26.3	g/m³	04/05/2021	Amit Kumar KTP	
1834 Sodium - Dissolved	189	g/m³	04/05/2021	Amit Kumar KTP	
2088 Dissolved Reactive Phosphorus	0.016	g/m³	21/04/2021	Divina Lagazon KTP	
6701 Aluminium - Dissolved	0.018	g/m³	16/04/2021	Shanel Kumar KTP	
6703 Arsenic - Dissolved	0.002	g/m³	16/04/2021	Shanel Kumar KTP	
6707 Boron - Dissolved	2.05	g/m³	16/04/2021	Shanel Kumar KTP	
6708 Cadmium - Dissolved	< 0.0002	g/m³	16/04/2021	Shanel Kumar KTP	
6711 Chromium - Dissolved	0.002	g/m³	16/04/2021	Shanel Kumar KTP	
6713 Copper - Dissolved	0.0006	g/m³	16/04/2021	Shanel Kumar KTP	
6718 Lead - Dissolved	< 0.0005	g/m³	16/04/2021	Shanel Kumar KTP	
6721 Manganese - Dissolved	0.0531	g/m³	16/04/2021	Shanel Kumar KTP	
6722 Mercury - Dissolved	< 0.0005	g/m³	16/04/2021	Shanel Kumar KTP	
6724 Nickel - Dissolved	0.0053	g/m³	16/04/2021	Shanel Kumar KTP	
6726 Potassium - Dissolved	84.8	g/m³	16/04/2021	Shanel Kumar KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-27	Levin C2		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208686-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6738 Zinc - Dissolved	0.003	g/m ³		16/04/2021	Shanel Kumar KTP
M0104 E. coli	4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m ³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m ³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-020 p,p'-DDE	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		23/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		23/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		23/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L		23/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 63 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-27	Levin C2		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208686-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	0.0001	mg/L		23/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0010	mg/L		23/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 64 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-27	Levin C2		15/04/2021 00:00	15/04/2021 13:30	0
Notes: 208686-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
<hr/>					
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-28	Levin C1		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208685-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
0001 pH	6.7		16/04/2021	Jennifer Mont KTP	
0002 Suspended Solids - Total	122	g/m³	16/04/2021	Jennifer Mont KTP	
0040 Total (NP) Organic Carbon	17.2	g/m³	16/04/2021	Amit Kumar KTP	
0052 Alkalinity - Total	281	g CaCO3/m³	16/04/2021	Jennifer Mont KTP	
0055 Conductivity at 25°C	107	mS/m	16/04/2021	Jennifer Mont KTP	
0081 Chemical Oxygen Demand	56	g/m³	16/04/2021	Gordon McArthur KTP	
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³	21/04/2021	Gordon McArthur KTP	
0602 Chloride	129	g/m³	19/04/2021	Shanel Kumar KTP	
0605 Nitrate - Nitrogen	< 0.10	g/m³	20/04/2021	Shanel Kumar KTP	
0607 Sulphate	31.1	g/m³	19/04/2021	Shanel Kumar KTP	
0760 Ammonia Nitrogen	7.82	g/m³	21/04/2021	Divina Lagazon KTP	
1642 Total Hardness	231	g CaCO3/m³	16/04/2021	Shanel Kumar KTP	
1810 Calcium - Dissolved	43.7	g/m³	16/04/2021	Shanel Kumar KTP	
1819 Iron - Dissolved	1.65	g/m³	16/04/2021	Shanel Kumar KTP	
1822 Magnesium - Dissolved	29.5	g/m³	16/04/2021	Shanel Kumar KTP	
1834 Sodium - Dissolved	95.0	g/m³	16/04/2021	Shanel Kumar KTP	
2088 Dissolved Reactive Phosphorus	0.015	g/m³	21/04/2021	Divina Lagazon KTP	
6701 Aluminium - Dissolved	0.012	g/m³	16/04/2021	Shuyu Zhao KTP	
6703 Arsenic - Dissolved	0.001	g/m³	16/04/2021	Shuyu Zhao KTP	
6707 Boron - Dissolved	0.64	g/m³	16/04/2021	Shuyu Zhao KTP	
6708 Cadmium - Dissolved	< 0.0002	g/m³	16/04/2021	Shuyu Zhao KTP	
6711 Chromium - Dissolved	< 0.001	g/m³	16/04/2021	Shuyu Zhao KTP	
6713 Copper - Dissolved	0.0008	g/m³	16/04/2021	Shuyu Zhao KTP	
6718 Lead - Dissolved	0.0006	g/m³	16/04/2021	Shuyu Zhao KTP	
6721 Manganese - Dissolved	0.350	g/m³	16/04/2021	Shuyu Zhao KTP	
6722 Mercury - Dissolved	< 0.0005	g/m³	16/04/2021	Shuyu Zhao KTP	
6724 Nickel - Dissolved	0.0008	g/m³	16/04/2021	Shuyu Zhao KTP	
6726 Potassium - Dissolved	20.6	g/m³	16/04/2021	Shuyu Zhao KTP	
6738 Zinc - Dissolved	< 0.002	g/m³	16/04/2021	Shuyu Zhao KTP	
M0104 E. coli	< 4	cfu/100mL	16/04/2021	Maria Norris KTP	
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed		16/04/2021	Harsimran Dhanoa .	
SVOC-001 2,3-Diuron	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-002 a-BHC	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-003 a-chlordane	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-004 Aldrin	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-005 b-BHC	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-006 cis-Permethrin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-007 Dieldrin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-008 Endosulfan II	<0.005	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-28	Levin C1		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208685-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
SVOC-010 Endrin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-011 Endrin Aldehyde	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-012 Endrin Ketone	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-013 Gamma-Chlordane	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-014 Heptachlor	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-016 Hexachlorobenzene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-018 Methoxychlor	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-019 p,p'-DDD	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-020 p,p'DDE	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-021 p,p'-DDT	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-022 Procymidone	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-023 Propanil	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-024 Endosulfan I	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-025 Alachlor	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-026 Aldicarb	<0.1	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-027 Atrazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-028 Bromacil	<0.005	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-029 Carbofuran	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-030 Cyanazine	<0.005	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-031 d-BHC	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-032 Metalaxyl-M	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-033 Metolachlor	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-034 Metribuzin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-035 Molinate	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-037 Oxadiazon	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-038 Pendimethalin	<0.002	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-039 Propazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-040 Pyriproxyfen	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-041 Simazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-042 Terbutylazine	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-043 Trifluralin	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-044 Hexazinone	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-045 Chlorpyrifos	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-046 Diazinon	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-047 Dimethoate	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-048 Pirimiphos methyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-049 Acenaphthene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-050 Acenaphthylene	<0.0010	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-051 Anthracene	<0.0010	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-052 benz(a)anthracene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-053 Benzo(a)pyrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	<0.0010	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-057 Chrysene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-058 Dibenz(a,h)anthracene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-059 Fluoranthene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-060 Fluorene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-062 Naphthalene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-063 Phenanthrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-064 Pyrene	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-070 2,2',3,4,4',5',6'-Heptachlorobiphenyl	<0.0001	mg/L	23/04/2021	Joanna Yang KTP	
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0010	mg/L	23/04/2021	Joanna Yang KTP	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Ilancko KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 66 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-28	Levin C1		15/04/2021 00:00	16/04/2021 07:00	0
Notes: 208685-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-003 Benzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-007 Naphthalene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-010 o-Xylene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-014 Styrene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-016 Toluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-064 Chloroform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-065 Dibromochloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 67 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-29	Levin Xd1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208684-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	9	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	4.7	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	162	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	54.1	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	20	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	57.9	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	< 0.02	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.36	g/m³		13/04/2021	Divina Lagazon KTP
1642 Total Hardness	167	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	39.1	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.071	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	16.7	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	50.0	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.109	g/m³		13/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.501	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	5.32	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	4	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 68 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-29	Levin Xd1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208684-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 69 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-29	Levin Xd1		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208684-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-30	Levin G1D		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208683-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.1			13/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	< 4	g/m³		13/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	1.9	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	58	g CaCO3/m³		13/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	28.1	mS/m		13/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	< 15	g/m³		13/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	31.5	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	19.5	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.09	g/m³		13/04/2021	Divina Lagazon KTP
1642 Total Hardness	56	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	8.35	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.675	g/m³		20/04/2021	Amit Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 70 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-30	Levin G1D		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208683-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
1822 Magnesium - Dissolved	8.50	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	31.0	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.034	g/m³		13/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.002	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.04	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.0641	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	6.07	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		13/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			13/04/2021	Freddie Badraun .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 71 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-30	Levin G1D		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208683-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlорpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5'-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L		14/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iiancko KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 72 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-30	Levin G1D		12/04/2021 00:00	13/04/2021 09:47	0
Notes: 208683-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-31	Levin E2d		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208682-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			15/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	7	g/m³		15/04/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	2.8	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	138	g CaCO3/m³		15/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	44.4	mS/m		15/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	< 15	g/m³		16/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 1	g/m³		15/04/2021	Marylou Cabral KTP
0602 Chloride	40.6	g/m³		16/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		16/04/2021	Shanel Kumar KTP
0607 Sulphate	< 0.02	g/m³		16/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.25	g/m³		21/04/2021	Divina Lagazon KTP
1642 Total Hardness	121	g CaCO3/m³		06/05/2021	Shuyu Zhao KTP
1810 Calcium - Dissolved	26.8	g/m³		06/05/2021	Shuyu Zhao KTP
1819 Iron - Dissolved	0.046	g/m³		06/05/2021	Shuyu Zhao KTP
1822 Magnesium - Dissolved	13.2	g/m³		06/05/2021	Shuyu Zhao KTP
1834 Sodium - Dissolved	40.9	g/m³		06/05/2021	Shuyu Zhao KTP
2088 Dissolved Reactive Phosphorus	0.624	g/m³		21/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.001	g/m³		16/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.07	g/m³		16/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		16/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		16/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.409	g/m³		16/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		16/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	6.67	g/m³		16/04/2021	Shanel Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 73 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-31	Levin E2d		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208682-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6738 Zinc - Dissolved	< 0.002	g/m³		16/04/2021	Shanel Kumar KTP
M0104 E. coli	4	cfu/100mL		15/04/2021	Sunita Raju KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			15/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-008 Endosulfan II	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		22/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		22/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-032 Metalaxy-M	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		22/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		22/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 74 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-31	Levin E2d		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208682-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	0.0001	mg/L		22/04/2021	Joanna Yang KTP
SVOC-072 Bis(2-ethylhexyl)adipate	0.0016	mg/L		22/04/2021	Joanna Yang KTP
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-003 Benzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-005 Isopropylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-007 Naphthalene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-008 n-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-009 n-Propylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-010 o-Xylene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-013 sec-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-014 Styrene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-015 tert-Butylbenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-016 Toluene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-032 Allyl chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-034 Bromomethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-036 Chloroethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-037 Chloromethane	<0.006	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-040 Dibromomethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-042 Dichloromethane	<0.005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-047 Trichloroethene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iiancko KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-31	Levin E2d		14/04/2021 00:00	15/04/2021 09:10	0
Notes: 208682-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-057 Bromobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-062 Bromodichloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-063 Bromoform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-064 Chloroform	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	<0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-32	Levin E1d		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208681-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			14/04/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	9	g/m³		14/04/2021	Gordon McArthur KTP
0040 Total (NP) Organic Carbon	3.0	g/m³		15/04/2021	Amit Kumar KTP
0052 Alkalinity - Total	151	g CaCO3/m³		14/04/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	44.7	mS/m		14/04/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	26	g/m³		14/04/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 3	g/m³		14/04/2021	Gordon McArthur KTP
0602 Chloride	38.5	g/m³		15/04/2021	Shanel Kumar KTP
0605 Nitrate - Nitrogen	< 0.01	g/m³		15/04/2021	Shanel Kumar KTP
0607 Sulphate	< 0.02	g/m³		15/04/2021	Shanel Kumar KTP
0760 Ammonia Nitrogen	0.20	g/m³		15/04/2021	Divina Lagazon KTP
1642 Total Hardness	138	g CaCO3/m³		20/04/2021	Amit Kumar KTP
1810 Calcium - Dissolved	32.6	g/m³		20/04/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.023	g/m³		20/04/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	13.8	g/m³		20/04/2021	Amit Kumar KTP
1834 Sodium - Dissolved	37.2	g/m³		20/04/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.390	g/m³		15/04/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
6703 Arsenic - Dissolved	0.007	g/m³		15/04/2021	Shanel Kumar KTP
6707 Boron - Dissolved	0.06	g/m³		15/04/2021	Shanel Kumar KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		15/04/2021	Shanel Kumar KTP
6711 Chromium - Dissolved	< 0.001	g/m³		15/04/2021	Shanel Kumar KTP
6713 Copper - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6718 Lead - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6721 Manganese - Dissolved	0.240	g/m³		15/04/2021	Shanel Kumar KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		15/04/2021	Shanel Kumar KTP
6726 Potassium - Dissolved	5.14	g/m³		15/04/2021	Shanel Kumar KTP
6738 Zinc - Dissolved	< 0.002	g/m³		15/04/2021	Shanel Kumar KTP
M0104 E. coli	< 4	cfu/100mL		14/04/2021	Maria Norris KTP
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed by
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed by
P1859 Sample Filtration	Completed			14/04/2021	Harsimran Dhanoa .
SVOC-001 2,3-Diuron	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-002 a-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-003 a-chlordane	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-004 Aldrin	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-005 b-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-006 cis-Permethrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-007 Dieldrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 76 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-32	Levin E1d		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208681-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
SVOC-008 Endosulfan II	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-010 Endrin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-011 Endrin Aldehyde	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-012 Endrin Ketone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-014 Heptachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-018 Methoxychlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-022 Procymidone	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-023 Propanil	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-024 Endosulfan I	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-025 Alachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-026 Aldicarb	<0.1	mg/L		14/04/2021	Joanna Yang KTP
SVOC-027 Atrazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-028 Bromacil	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-029 Carbofuran	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-030 Cyanazine	<0.005	mg/L		14/04/2021	Joanna Yang KTP
SVOC-031 d-BHC	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-033 Metolachlor	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-034 Metribuzin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-035 Molinate	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-038 Pendimethalin	<0.002	mg/L		14/04/2021	Joanna Yang KTP
SVOC-039 Propazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-041 Simazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-042 Terbutylazine	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-043 Trifluralin	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-044 Hexazinone	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-046 Diazinon	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-047 Dimethoate	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-049 Acenaphthene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-051 Anthracene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		14/04/2021	Joanna Yang KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-057 Chrysene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-060 Fluorene	< 0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-062 Naphthalene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-064 Pyrene	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphenyl	0.001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiphenyl	<0.0001	mg/L		14/04/2021	Joanna Yang KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 77 of 85

Report Number: 21/5067-1 ELS

01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-32	Levin E1d		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208681-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0030	mg/L	14/04/2021	Joanna Yang KTP	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-003 Benzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-005 Isopropylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-007 Naphthalene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-008 n-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-009 n-Propylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-010 o-Xylene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-011 p-Isopropyltoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-013 sec-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-014 Styrene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-015 tert-Butylbenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-016 Toluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-017 Total p,m Xylene, Ethylbenzene	<0.0015	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-032 Allyl chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-034 Bromomethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-036 Chloroethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-037 Chloromethane	<0.006	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-040 Dibromomethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-042 Dichloromethane	<0.005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-047 Trichloroethene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-057 Bromobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-062 Bromodichloromethane	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	
VOC-063 Bromoform	<0.0005	mg/L	23/04/2021	Ganesh Iланко KTP	

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 78 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-32	Levin E1d		13/04/2021 00:00	14/04/2021 09:28	0
Notes: 208681-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
VOC-064 Chloroform	< 0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		23/04/2021	Ganesh Iланко KTP
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-33	Levin Leachate Pond		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210682-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.9			21/05/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	30	g/m³		19/05/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	931	g/m³		25/05/2021	Amit Kumar KTP
0052 Alkalinity - Total	7,000	g CaCO3/m³		25/05/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	1,690	mS/m		21/05/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	4,980	g/m³		20/05/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	134	g/m³		20/05/2021	Marylou Cabral KTP
0602 Chloride	1,350	g/m³		24/05/2021	Amit Kumar KTP
0605 Nitrate - Nitrogen	< 1.00	g/m³		24/05/2021	Amit Kumar KTP
0607 Sulphate	74.8	g/m³		24/05/2021	Amit Kumar KTP
0760 Ammonia Nitrogen	1,460	g/m³		28/05/2021	Divina Lagazon KTP
1642 Total Hardness	520	g CaCO3/m³		25/05/2021	Amit Kumar KTP
1810 Calcium - Dissolved	109	g/m³		25/05/2021	Amit Kumar KTP
1819 Iron - Dissolved	4.09	g/m³		25/05/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	60.2	g/m³		25/05/2021	Amit Kumar KTP
1834 Sodium - Dissolved	1,120	g/m³		25/05/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	15.2	g/m³		28/05/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.964	g/m³		21/05/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	0.407	g/m³		21/05/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	6.94	g/m³		21/05/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0020	g/m³		21/05/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	1.06	g/m³		21/05/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0176	g/m³		21/05/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0050	g/m³		21/05/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	1.30	g/m³		21/05/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0050	g/m³		21/05/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	0.134	g/m³		21/05/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	746	g/m³		21/05/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	0.086	g/m³		21/05/2021	Shuyu Zhao KTP
M0104 E. coli	390	cfu/100mL		19/05/2021	Yuemei Yu KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			20/05/2021	Harsimran Dhanoa .
Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-34	Levin HS3		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210686-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			20/05/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	400	g/m³		19/05/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	49.7	g/m³		20/05/2021	Amit Kumar KTP
0052 Alkalinity - Total	65	g CaCO3/m³		20/05/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	26.1	mS/m		20/05/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	67	g/m³		20/05/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		20/05/2021	Marylou Cabral KTP
0602 Chloride	25.8	g/m³		24/05/2021	Amit Kumar KTP
0605 Nitrate - Nitrogen	0.50	g/m³		24/05/2021	Amit Kumar KTP
0607 Sulphate	14.3	g/m³		24/05/2021	Amit Kumar KTP
0760 Ammonia Nitrogen	0.73	g/m³		24/05/2021	Divina Lagazon KTP
1642 Total Hardness	72	g CaCO3/m³		25/05/2021	Amit Kumar KTP
1810 Calcium - Dissolved	16.2	g/m³		25/05/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.727	g/m³		25/05/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.67	g/m³		25/05/2021	Amit Kumar KTP
1834 Sodium - Dissolved	20.5	g/m³		25/05/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.017	g/m³		24/05/2021	Divina Lagazon KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-34	Levin HS3		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210686-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
6701 Aluminium - Dissolved	0.413	g/m³		20/05/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		20/05/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	0.06	g/m³		20/05/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		20/05/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	< 0.001	g/m³		20/05/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0008	g/m³		20/05/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	0.0006	g/m³		20/05/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	0.0586	g/m³		20/05/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		20/05/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		20/05/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	3.64	g/m³		20/05/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	0.002	g/m³		20/05/2021	Shuyu Zhao KTP
M0104 E. coli	810	cfu/100mL		19/05/2021	Yuemei Yu KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			20/05/2021	Harsimran Dhanoa .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-35	Levin HS2		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210685-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			20/05/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	60	g/m³		19/05/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	7.8	g/m³		20/05/2021	Amit Kumar KTP
0052 Alkalinity - Total	67	g CaCO3/m³		20/05/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	25.7	mS/m		20/05/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	44	g/m³		20/05/2021	Gordon McArthur KTP
0180 BOD5 - Soluble Carbonaceous	< 6	g/m³		20/05/2021	Marylou Cabral KTP
0602 Chloride	26.9	g/m³		24/05/2021	Amit Kumar KTP
0605 Nitrate - Nitrogen	0.50	g/m³		24/05/2021	Amit Kumar KTP
0607 Sulphate	10.5	g/m³		24/05/2021	Amit Kumar KTP
0760 Ammonia Nitrogen	0.79	g/m³		24/05/2021	Divina Lagazon KTP
1642 Total Hardness	69	g CaCO3/m³		25/05/2021	Amit Kumar KTP
1810 Calcium - Dissolved	14.9	g/m³		25/05/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.067	g/m³		25/05/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.81	g/m³		25/05/2021	Amit Kumar KTP
1834 Sodium - Dissolved	20.1	g/m³		25/05/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.063	g/m³		24/05/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.009	g/m³		20/05/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	< 0.001	g/m³		20/05/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	0.06	g/m³		20/05/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m³		20/05/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	< 0.001	g/m³		20/05/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0007	g/m³		20/05/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m³		20/05/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	0.0444	g/m³		20/05/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m³		20/05/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	< 0.0005	g/m³		20/05/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	3.85	g/m³		20/05/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	< 0.002	g/m³		20/05/2021	Shuyu Zhao KTP
M0104 E. coli	600	cfu/100mL		19/05/2021	Yuemei Yu KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed			20/05/2021	Harsimran Dhanoa .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-36	Levin HS1A		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210684-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.5			20/05/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	58	g/m³		19/05/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	8.5	g/m³		20/05/2021	Amit Kumar KTP

Wellington
85 Port Road, Seaview
Lower Hutt 5045
Phone: (04) 576-5016

Rolleston
43 Detroit Drive
Rolleston 7675
Phone: (03) 343-5227

Dunedin
16 Lorne Street
South Dunedin 9012
Phone: (03) 972-7963

Page 80 of 85
Report Number: 21/5067-1 ELS
01 June 2021 16:51:33

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-36	Levin HS1A		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210684-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0052 Alkalinity - Total	65	g CaCO ₃ /m ³		20/05/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	24.8	mS/m		20/05/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	40	g/m ³		20/05/2021	Gordon McArthur KTP
0180 BOD ₅ - Soluble Carbonaceous	< 6	g/m ³		20/05/2021	Marylou Cabral KTP
0602 Chloride	24.5	g/m ³		24/05/2021	Amit Kumar KTP
0605 Nitrate - Nitrogen	0.42	g/m ³		24/05/2021	Amit Kumar KTP
0607 Sulphate	10.1	g/m ³		24/05/2021	Amit Kumar KTP
0760 Ammonia Nitrogen	0.75	g/m ³		24/05/2021	Divina Lagazon KTP
1642 Total Hardness	65	g CaCO ₃ /m ³		25/05/2021	Amit Kumar KTP
1810 Calcium - Dissolved	13.9	g/m ³		25/05/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.067	g/m ³		25/05/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.35	g/m ³		25/05/2021	Amit Kumar KTP
1834 Sodium - Dissolved	18.6	g/m ³		25/05/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.042	g/m ³		24/05/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.014	g/m ³		20/05/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	< 0.001	g/m ³		20/05/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	0.06	g/m ³		20/05/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m ³		20/05/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	< 0.001	g/m ³		20/05/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0010	g/m ³		20/05/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m ³		20/05/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	0.0265	g/m ³		20/05/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m ³		20/05/2021	Shuyu Zhao KTP
6724 Nickel - Dissolved	< 0.0005	g/m ³		20/05/2021	Shuyu Zhao KTP
6726 Potassium - Dissolved	3.19	g/m ³		20/05/2021	Shuyu Zhao KTP
6738 Zinc - Dissolved	0.004	g/m ³		20/05/2021	Shuyu Zhao KTP
M0104 E. coli	580	cfu/100mL		19/05/2021	Yuemei Yu KTP
MO-5001 Volatile Fatty Acids	Not Available *	g/m ³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m ³			
P1859 Sample Filtration	Completed			20/05/2021	Harsimran Dhanoa .

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-37	Levin HS1		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210683-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	7.6			20/05/2021	Jennifer Mont KTP
0002 Suspended Solids - Total	56	g/m ³		19/05/2021	Jennifer Mont KTP
0040 Total (NP) Organic Carbon	7.9	g/m ³		20/05/2021	Amit Kumar KTP
0052 Alkalinity - Total	67	g CaCO ₃ /m ³		20/05/2021	Jennifer Mont KTP
0055 Conductivity at 25°C	25.0	mS/m		20/05/2021	Jennifer Mont KTP
0081 Chemical Oxygen Demand	29	g/m ³		20/05/2021	Gordon McArthur KTP
0180 BOD ₅ - Soluble Carbonaceous	< 6	g/m ³		20/05/2021	Marylou Cabral KTP
0602 Chloride	24.5	g/m ³		24/05/2021	Amit Kumar KTP
0605 Nitrate - Nitrogen	0.42	g/m ³		24/05/2021	Amit Kumar KTP
0607 Sulphate	28.4	g/m ³		24/05/2021	Amit Kumar KTP
0760 Ammonia Nitrogen	0.80	g/m ³		24/05/2021	Divina Lagazon KTP
1642 Total Hardness	65	g CaCO ₃ /m ³		25/05/2021	Amit Kumar KTP
1810 Calcium - Dissolved	14.0	g/m ³		25/05/2021	Amit Kumar KTP
1819 Iron - Dissolved	0.048	g/m ³		25/05/2021	Amit Kumar KTP
1822 Magnesium - Dissolved	7.36	g/m ³		25/05/2021	Amit Kumar KTP
1834 Sodium - Dissolved	18.7	g/m ³		25/05/2021	Amit Kumar KTP
2088 Dissolved Reactive Phosphorus	0.047	g/m ³		24/05/2021	Divina Lagazon KTP
6701 Aluminium - Dissolved	0.016	g/m ³		20/05/2021	Shuyu Zhao KTP
6703 Arsenic - Dissolved	< 0.001	g/m ³		20/05/2021	Shuyu Zhao KTP
6707 Boron - Dissolved	0.06	g/m ³		20/05/2021	Shuyu Zhao KTP
6708 Cadmium - Dissolved	< 0.0002	g/m ³		20/05/2021	Shuyu Zhao KTP
6711 Chromium - Dissolved	< 0.001	g/m ³		20/05/2021	Shuyu Zhao KTP
6713 Copper - Dissolved	0.0007	g/m ³		20/05/2021	Shuyu Zhao KTP
6718 Lead - Dissolved	< 0.0005	g/m ³		20/05/2021	Shuyu Zhao KTP
6721 Manganese - Dissolved	0.0231	g/m ³		20/05/2021	Shuyu Zhao KTP
6722 Mercury - Dissolved	< 0.0005	g/m ³		20/05/2021	Shuyu Zhao KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/5067-37	Levin HS1		19/05/2021 00:00	19/05/2021 13:35	0
Notes: 210683-0 Levin Landfill Sample					
Test	Result	Units	Test Date	Signatory	
6724 Nickel - Dissolved	< 0.0005	g/m³	20/05/2021	Shuyu Zhao KTP	
6726 Potassium - Dissolved	3.18	g/m³	20/05/2021	Shuyu Zhao KTP	
6738 Zinc - Dissolved	< 0.002	g/m³	20/05/2021	Shuyu Zhao KTP	
M0104 E. coli	740	cfu/100mL	19/05/2021	Yuemei Yu KTP	
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Completed		20/05/2021	Harsimran Dhanoa .	

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO3/m³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method LTM-INO-4050 Total Phenolics in Waters and solids by CFA	0.05 g/m³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a
2,3-Diuron	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
a-BHC	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
a-chlordane	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Aldrin	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
b-BHC	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L

Test	Methodology	Detection Limit
cis-Permethrin	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Dieldrin	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Endosulfan II	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.005 mg/L
Endosulfan Sulfate	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Endrin	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Endrin Aldehyde	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Endrin Ketone	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Gamma-Chlordane	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Heptachlor	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Heptachlor Epoxide	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Hexachlorobenzene	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Lindane (g-BHC)	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Methoxychlor	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
p,p'-DDD	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
p,p'DDE	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
p,p'-DDT	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Procymidone	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Propanil	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Endosulfan I	Organochlorine Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Alachlor	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Aldicarb	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.1 mg/L
Atrazine	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Bromacil	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.005 mg/L
Carbofuran	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Cyanazine	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.005 mg/L
d-BHC	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Metalaxyl-M	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Metolachlor	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Metribuzin	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Molinate	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Oxadiazon	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Pendimethalin	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.002 mg/L
Propazine	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Pyriproxyfen	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Simazine	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Terbutylazine	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Trifluralin	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Hexazinone	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Chlorpyrifos	Organophosphorous Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Diazinon	Organophosphorous Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Dimethoate	Organophosphorous Pesticide compound analysed by in-house method using GC-MS	0.001 mg/L
Pirimiphos methyl	Organophosphorous Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Acenaphthene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Acenaphthylene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.001 mg/L
Anthracene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.001 mg/L
benz(a)anthracene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Benzo(a)pyrene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Total Benzo(b) and Benzo(k) fluoranthrene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.001 mg/L
Benzo(g,h,i)perylene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.001 mg/L
Chrysene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Dibenz(a,h)anthracene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Fluoranthene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Fluorene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Indeno(1,2,3-cd)pyrene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Naphthalene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Phenanthrene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
Pyrene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
2,2',3,4,4',5-Hexachlorobiphenyl	Polychlorinated biphenyl compound analysed by in-house method using GC-MS. Also known as PCB 138.	0.001 mg/L

Test	Methodology	Detection Limit
2,2',4,5,5'-Pentachlorobiphenyl	Polychlorinated biphenyl compound analysed by in-house method using GC-MS. Also known as PCB 101.	0.0001 mg/L
2,4,4'-Trichlorobiphenyl	Polychlorinated biphenyl compound analysed by in-house method using GC-MS. Also known as PCB 28.	0.0001 mg/L
2,4-Dichlorobiphenyl	Polychlorinated biphenyl compound analysed by in-house method using GC-MS. Also known as PCB 7.	0.0001 mg/L
2,2',3,4,4',5'-Heptachlorobiphenyl	Polychlorinated biphenyl compound analysed by in-house method using GC-MS. Also known as PCB 183.	0.0001 mg/L
Bis(2-ethylhexyl)adipate	Phthalate Plasticiser compound analysed by in-house method using GC-MS	0.0001 mg/L
1,2,4-Trimethylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,3,5-Trimethylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Benzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Isopropylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Naphthalene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
n-Butylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
n-Propylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
o-Xylene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
p-Isopropyltoluene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
sec-Butylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Styrene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
tert-Butylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Toluene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Total p,m Xylene, Ethylbenzene	VOC Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0015 mg/L
1,1,1,2-Tetrachloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,1,1-Trichloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,1,2,2-Tetrachloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,1,2-Trichloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,1-Dichloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,1-Dichloroethene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,1-Dichloropropene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,2,3-Trichloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,2-Dibromo-3-chloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.001 mg/L
1,2-Dibromoethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0002 mg/L
1,2-Dichloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,2-Dichloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,3-Dichloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
2,2-Dichloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Allyl chloride	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Bromochloromethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0012 mg/L
Bromomethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.001 mg/L
Carbon tetrachloride	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260. Also known as Tetrachloromethane.	0.0005 mg/L
Chloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.001 mg/L
Chloromethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.006 mg/L
cis-1,2-Dichloroethene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L

Test	Methodology	Detection Limit
	USEPA Method 8260.	
cis-1,3-Dichloropropene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Dibromomethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Dichlorodifluoromethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.001 mg/L
Dichloromethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.005 mg/L
Hexachlorobutadiene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0002 mg/L
Tetrachloroethene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
trans-1,2-Dichloroethene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
trans-1,3-Dichloropropene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Trichloroethene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Trichlorofluoromethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Vinyl Chloride	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,2,3-Trichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,2,4-Trichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,2-Dichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,3-Dichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,4-Dichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
2-Chlorotoluene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
4-Chlorotoluene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Bromobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Chlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1,3,5-Trichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
4-Methyl-2-Pentanone	VOC Other Volatile Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Carbon disulphide	VOC Other Volatile Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Bromodichloromethane	VOC Trihalomethane analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Bromoform	VOC Trihalomethane analysed by GCMS following an in house method based on USEPA Method 8260. Also known as Tribromomethane.	0.0005 mg/L
Chloroform	VOC Trihalomethane analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
Dibromochloromethane	VOC Trihalomethane analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m3 is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.



Report Released By
Rob Deacon

Analytical Report

Interim

Downer EDI Levin - Landfill

Report Number: 21/13725

P O Box 642
 LEVIN 5540
 Attention: Bruce Marshall

 Issue: 1
 01 June 2021

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
21/13725-01	Levin HS3		01/06/2021 00:00		0
Notes: 213701-0 Levin Landfill Sample					
Test	Result	Units		Test Date	Signatory
0001 pH	Not Available				
0002 Suspended Solids - Total	Not Available	g/m³			
0040 Total (NP) Organic Carbon	Not Available	g/m³			
0052 Alkalinity - Total	Not Available	g CaCO3/m³			
0055 Conductivity at 25°C	Not Available	mS/m			
0081 Chemical Oxygen Demand	Not Available	g/m³			
0180 BOD5 - Soluble Carbonaceous	Not Available	g/m³			
0602 Chloride	Not Available	g/m³			
0605 Nitrate - Nitrogen	Not Available	g/m³			
0607 Sulphate	Not Available	g/m³			
0760 Ammonia Nitrogen	Not Available	g/m³			
1642 Total Hardness	Not Available	g CaCO3/m³			
1810 Calcium - Dissolved	Not Available	g/m³			
1819 Iron - Dissolved	Not Available	g/m³			
1822 Magnesium - Dissolved	Not Available	g/m³			
1834 Sodium - Dissolved	Not Available	g/m³			
2088 Dissolved Reactive Phosphorus	Not Available	g/m³			
6701 Aluminium - Dissolved	Not Available	g/m³			
6703 Arsenic - Dissolved	Not Available	g/m³			
6707 Boron - Dissolved	Not Available	g/m³			
6708 Cadmium - Dissolved	Not Available	g/m³			
6711 Chromium - Dissolved	Not Available	g/m³			
6713 Copper - Dissolved	Not Available	g/m³			
6718 Lead - Dissolved	Not Available	g/m³			
6721 Manganese - Dissolved	Not Available	g/m³			
6722 Mercury - Dissolved	Not Available	g/m³			
6724 Nickel - Dissolved	Not Available	g/m³			
6726 Potassium - Dissolved	Not Available	g/m³			
6738 Zinc - Dissolved	Not Available	g/m³			
M0104 E. coli	Not Available	cfu/100mL			
MO-5001 Volatile Fatty Acids	Not Available *	g/m³			
MO-5002 Total Halogenated Phenolics	Not Available	g/m³			
P1859 Sample Filtration	Not Available				

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
pH	Dedicated pH meter following APHA Online Edition Method 4500-H B.	0.1
Suspended Solids - Total	APHA Online Edition Method 2540 D	3 g/m³
Total (NP) Organic Carbon	Total Non-Purgeable Organic Carbon using TOC analyser. APHA Online Edition 5310 B.	0.1 g/m³
Alkalinity - Total	APHA Online Edition Method 2320 B	1 g CaCO3/m³
Conductivity at 25°C	APHA Online Edition Method 2510 B.	0.1 mS/m
Chemical Oxygen Demand	APHA Online Edition Method 5220 D.	15 g/m³
BOD5 - Soluble Carbonaceous	APHA Online Edition Method 5210 B. The sample is filtered through Whatman GFC and treated with nitrification inhibitor.	1 g/m³

Wellington
 85 Port Road, Seaview
 Lower Hutt 5045
 Phone: (04) 576-5016

Rolleston
 43 Detroit Drive
 Rolleston 7675
 Phone: (03) 343-5227

Dunedin
 16 Lorne Street
 South Dunedin 9012
 Phone: (03) 972-7963

Page 1 of 2
 Report Number: 21/13725-1 ELS
 01 June 2021 16:51:12

Test	Methodology	Detection Limit
Chloride	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Nitrate - Nitrogen	Ion Chromatography following APHA 4110B.	0.01 g/m ³
Sulphate	Ion Chromatography following APHA 4110B.	0.02 g/m ³
Ammonia Nitrogen	Flow Injection Autoanalyser following APHA Online Edition Method 4500 NH3-H.	0.01 g/m ³
Total Hardness	ICP-OES following APHA Online Edition Method 3120 B (modified).	1 g CaCO ₃ /m ³
Calcium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Iron - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.005 g/m ³
Magnesium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.01 g/m ³
Sodium - Dissolved	ICP-OES following APHA Online Edition Method 3120 B (modified).	0.02 g/m ³
Dissolved Reactive Phosphorus	Flow Injection Autoanalyser following APHA Online Edition Method 4500-P G.	0.005 g/m ³
Aluminium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
Arsenic - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Boron - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.03 g/m ³
Cadmium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0002 g/m ³
Chromium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.001 g/m ³
Copper - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Lead - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Manganese - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Mercury - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Nickel - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.0005 g/m ³
Potassium - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified)	0.01 g/m ³
Zinc - Dissolved	ICP-MS following APHA Online Edition method 3125 (modified).	0.002 g/m ³
E. coli	APHA 9222I:Online Edition	1 cfu/100mL
Volatile Fatty Acids	Performed by Eurofins Melbourne following APHA 22nd Edition Method 5560C. Results are reported as acetic acid equivalent.	5 g/m ³
Total Halogenated Phenolics	Analyses at Eurofins Melbourne following Method LTM-INO-4050 Total Phenolics in Waters and solids by CFA	0.05 g/m ³
Sample Filtration	Sample filtered through 0.45 micron filter following APHA Online Edition Method 3030B.	n/a

Unless otherwise stated, all tests are performed in Wellington.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.

For liquid samples g/m³ is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

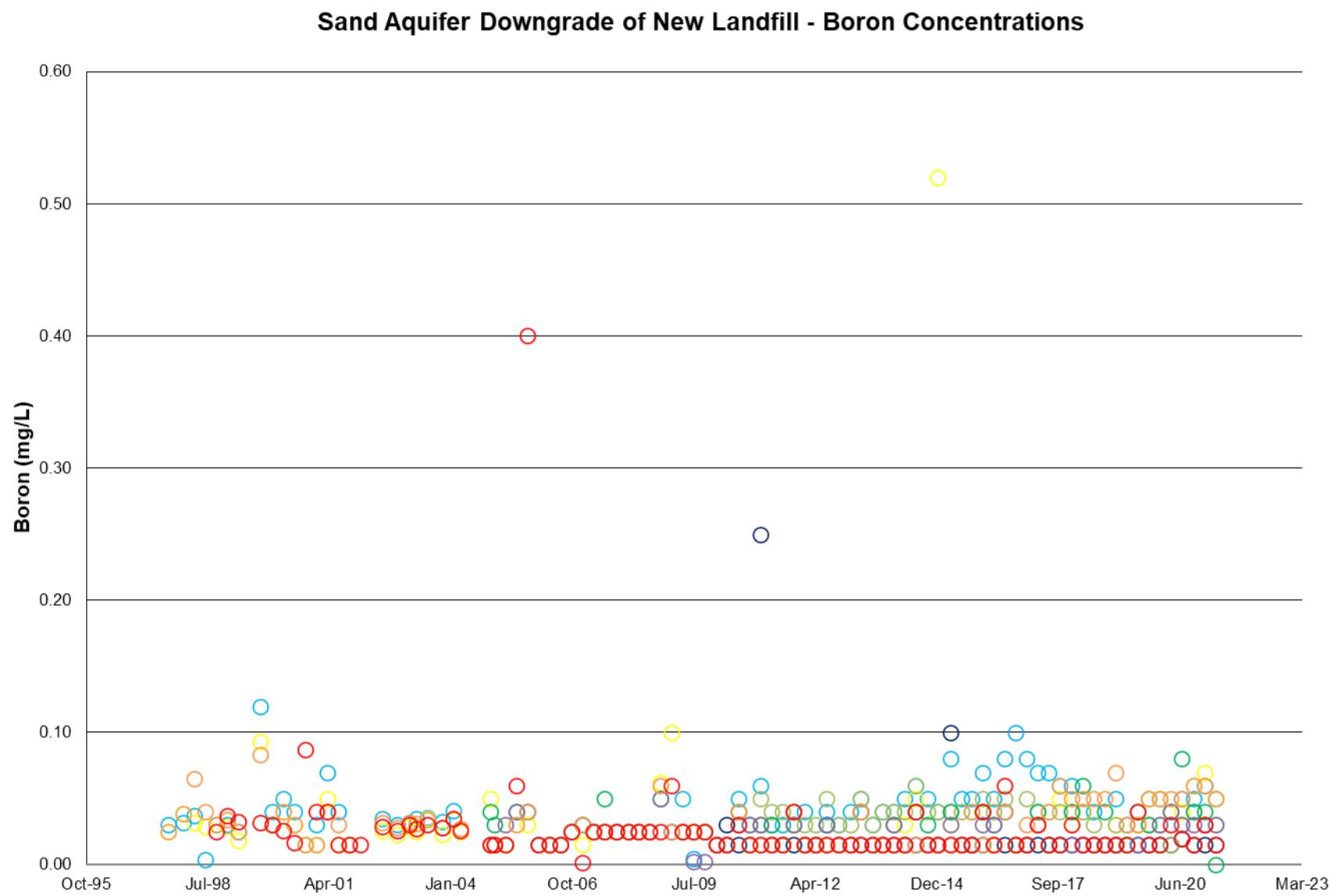


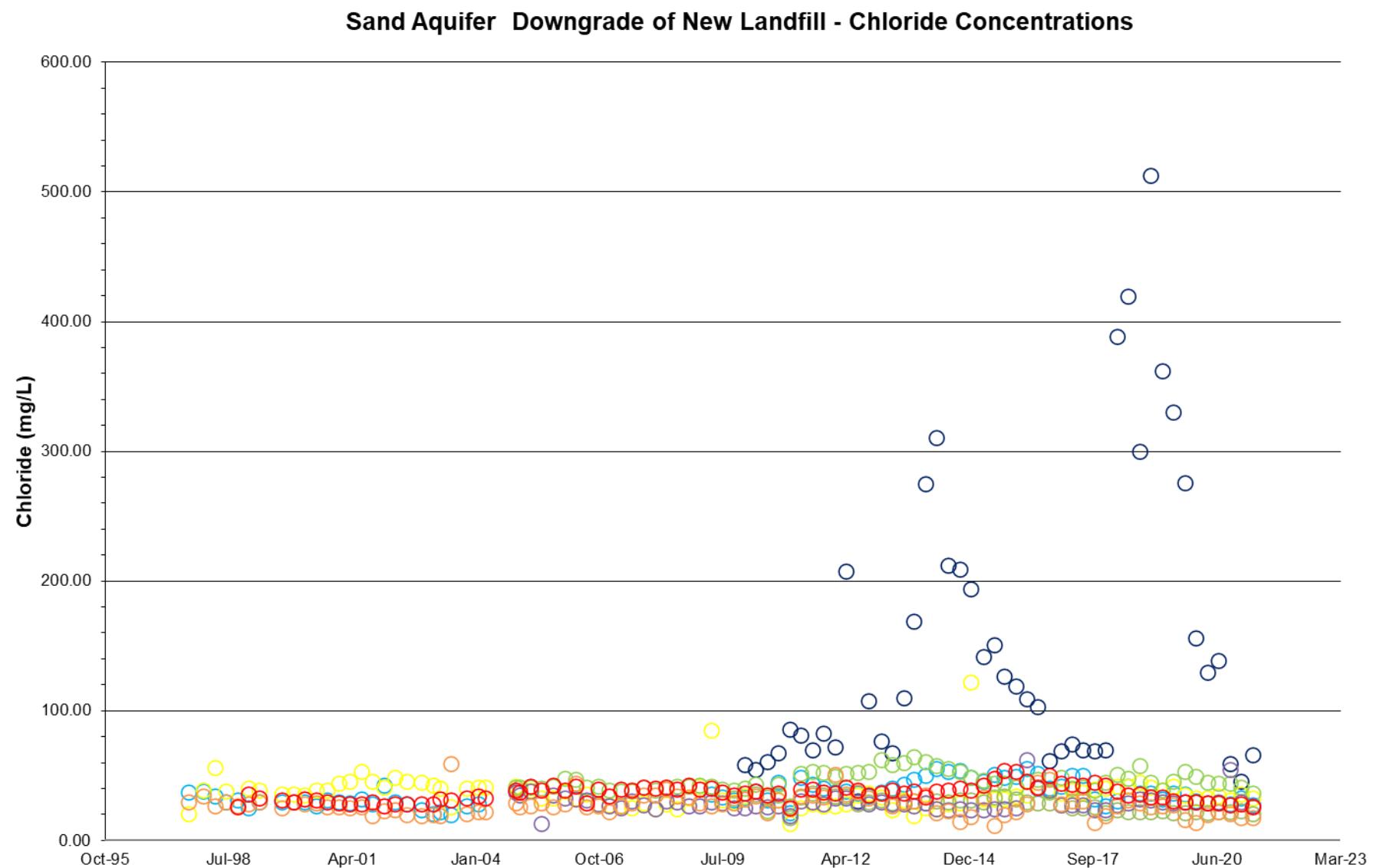
Report Released By
Rob Deacon

LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

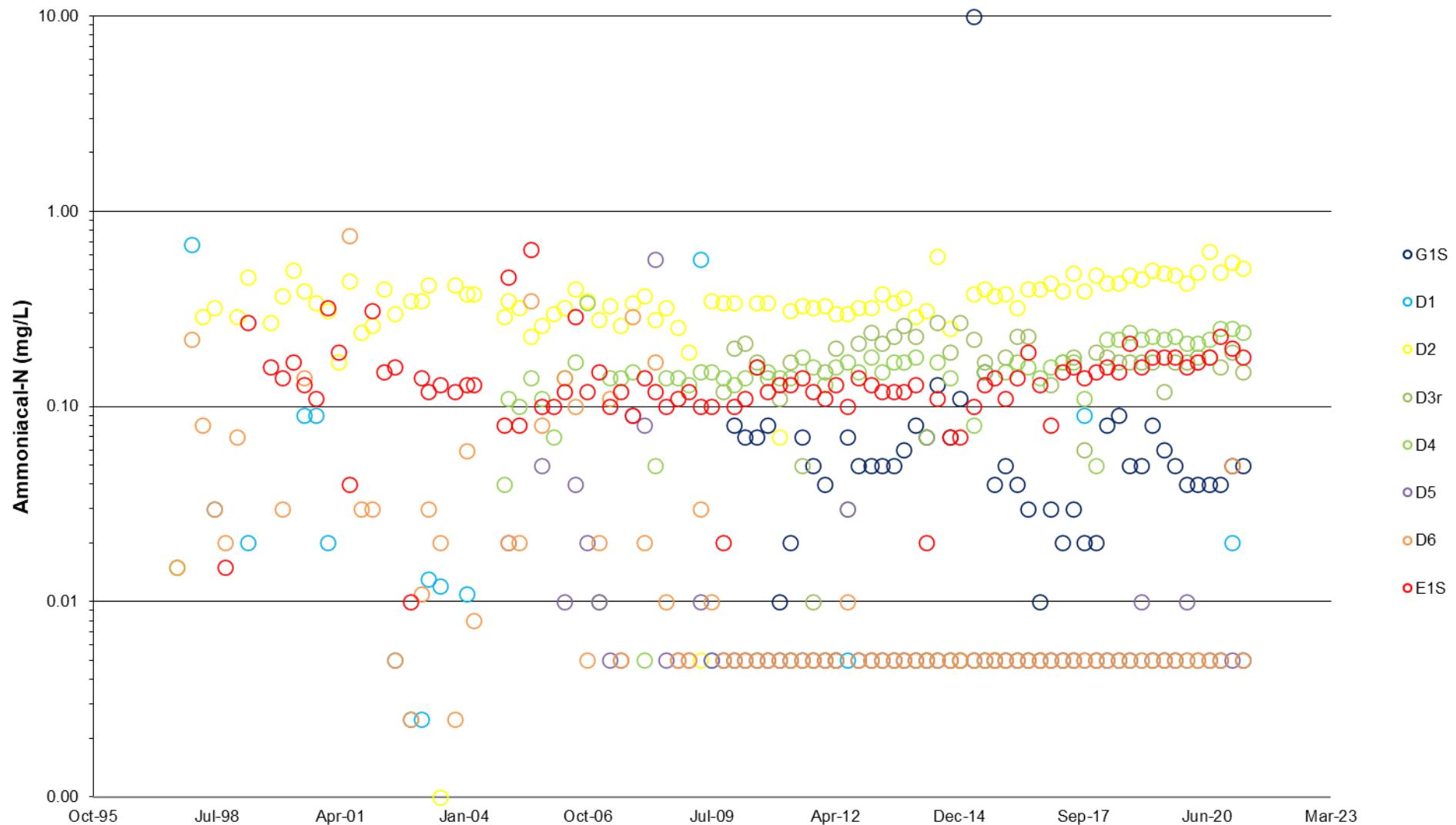
APPENDIX D HISTORICAL RESULT GRAPHS



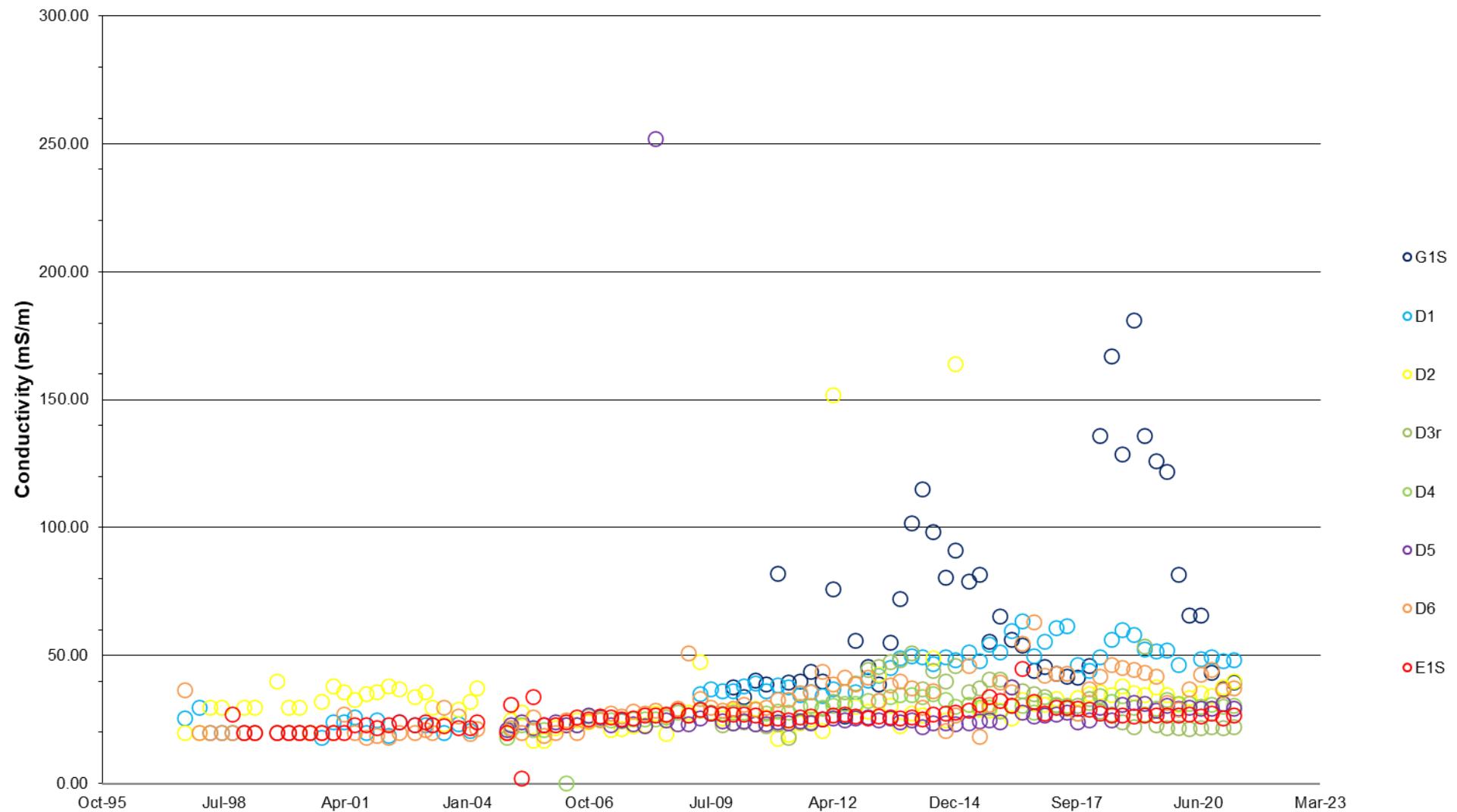


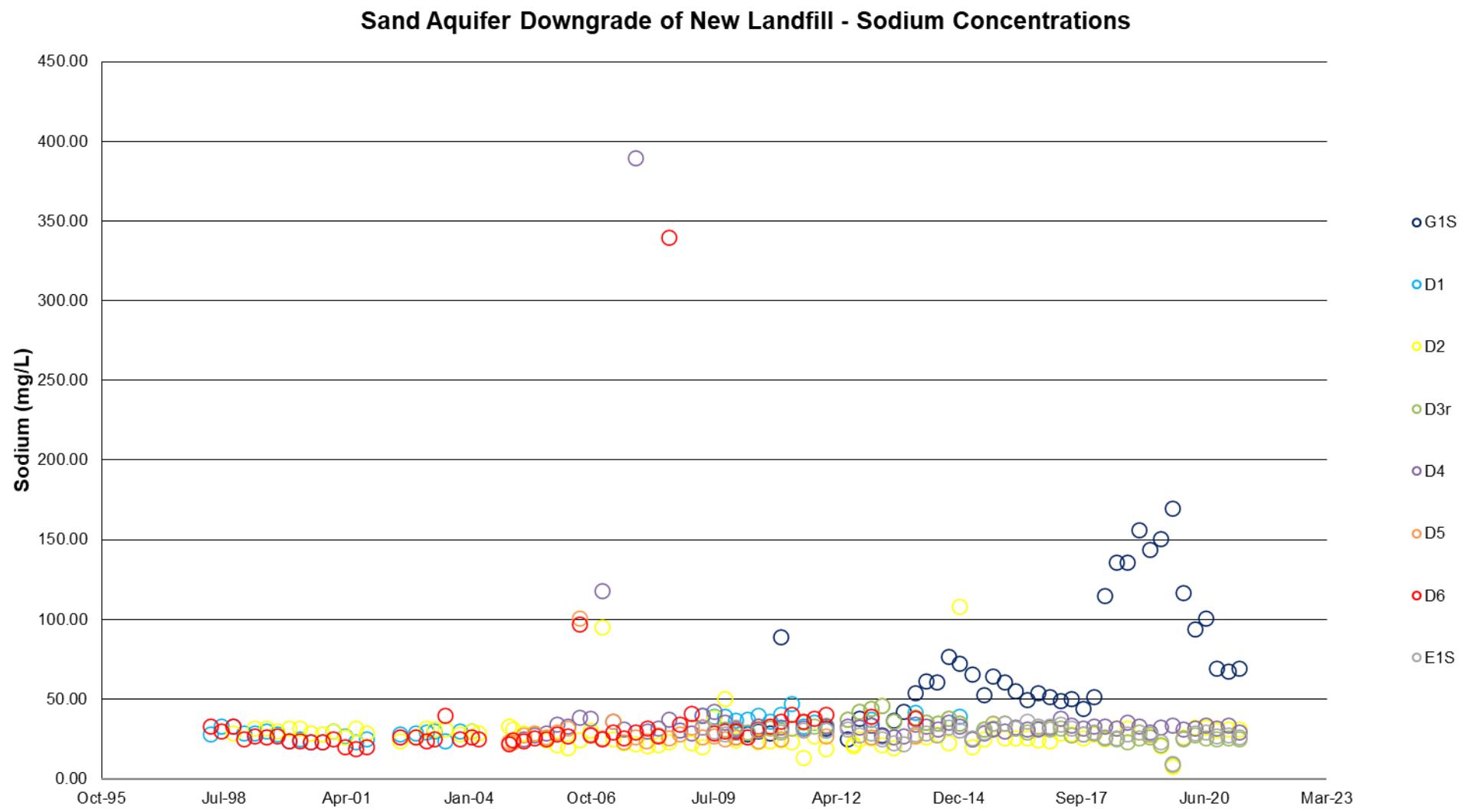


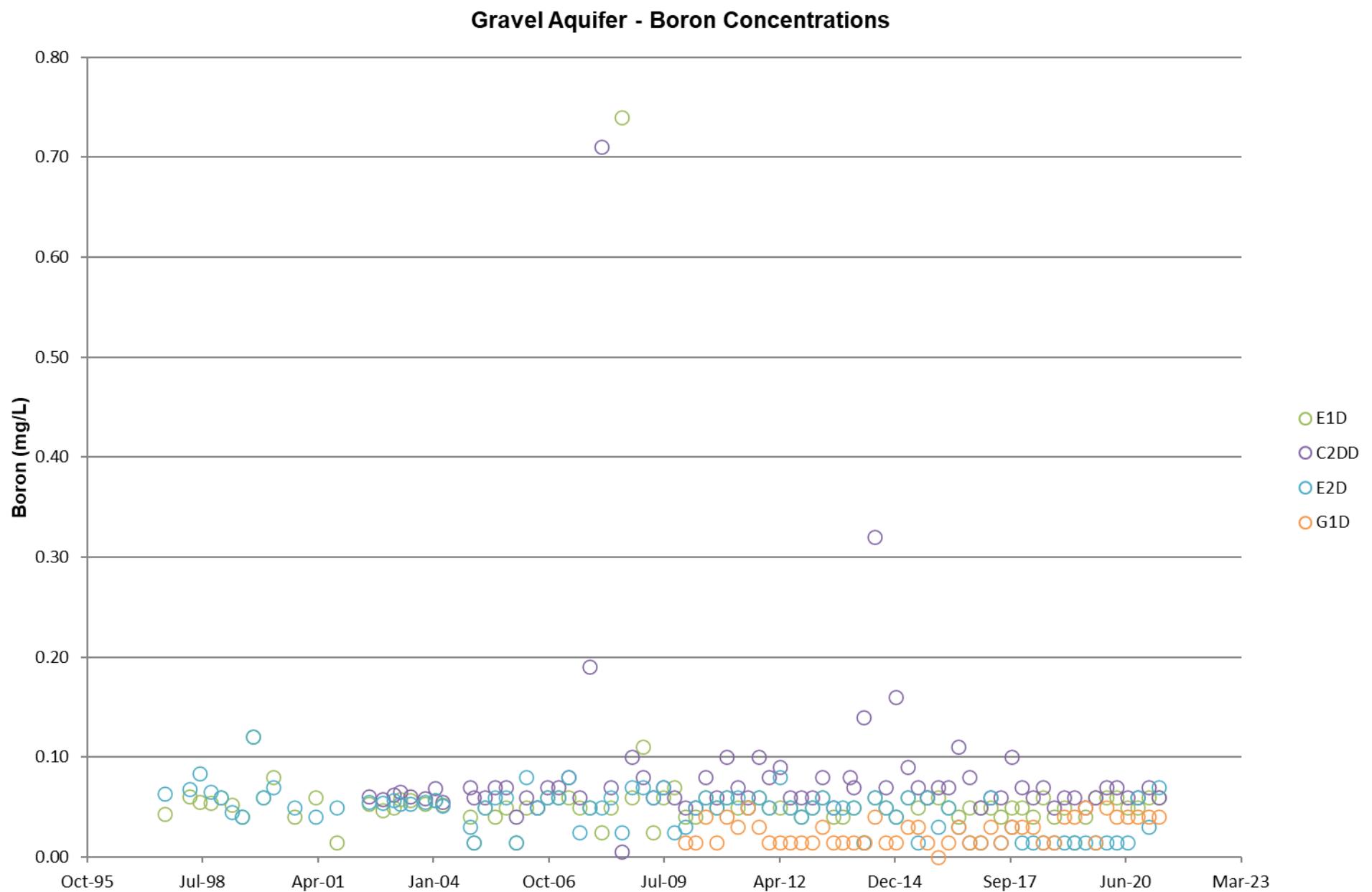
Sand Aquifer Downgrade of New Landfill - Ammoniacal-Nitrogen Concentrations



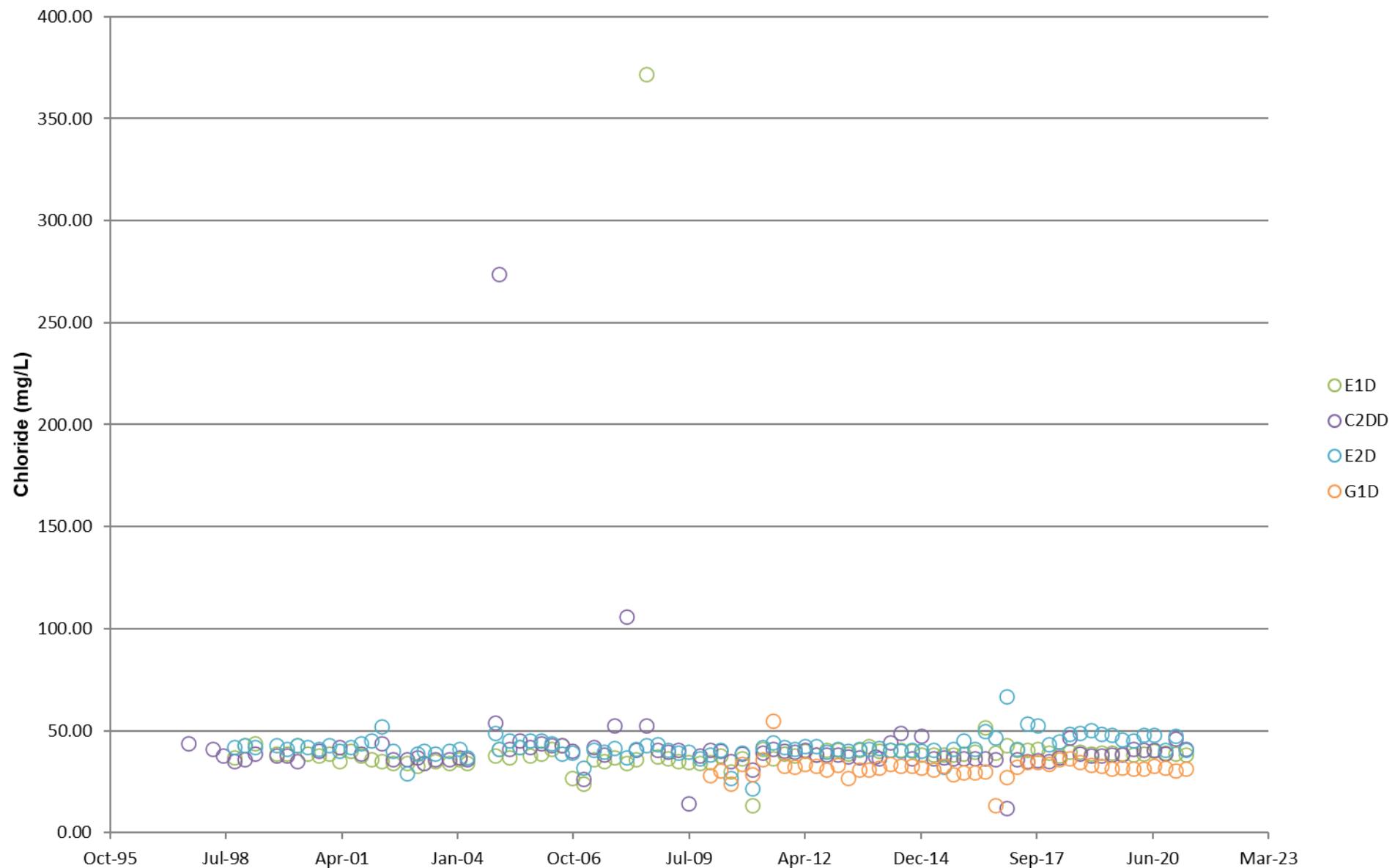
Sand Aquifer Downgrade of New Landfill - Conductivity Levels

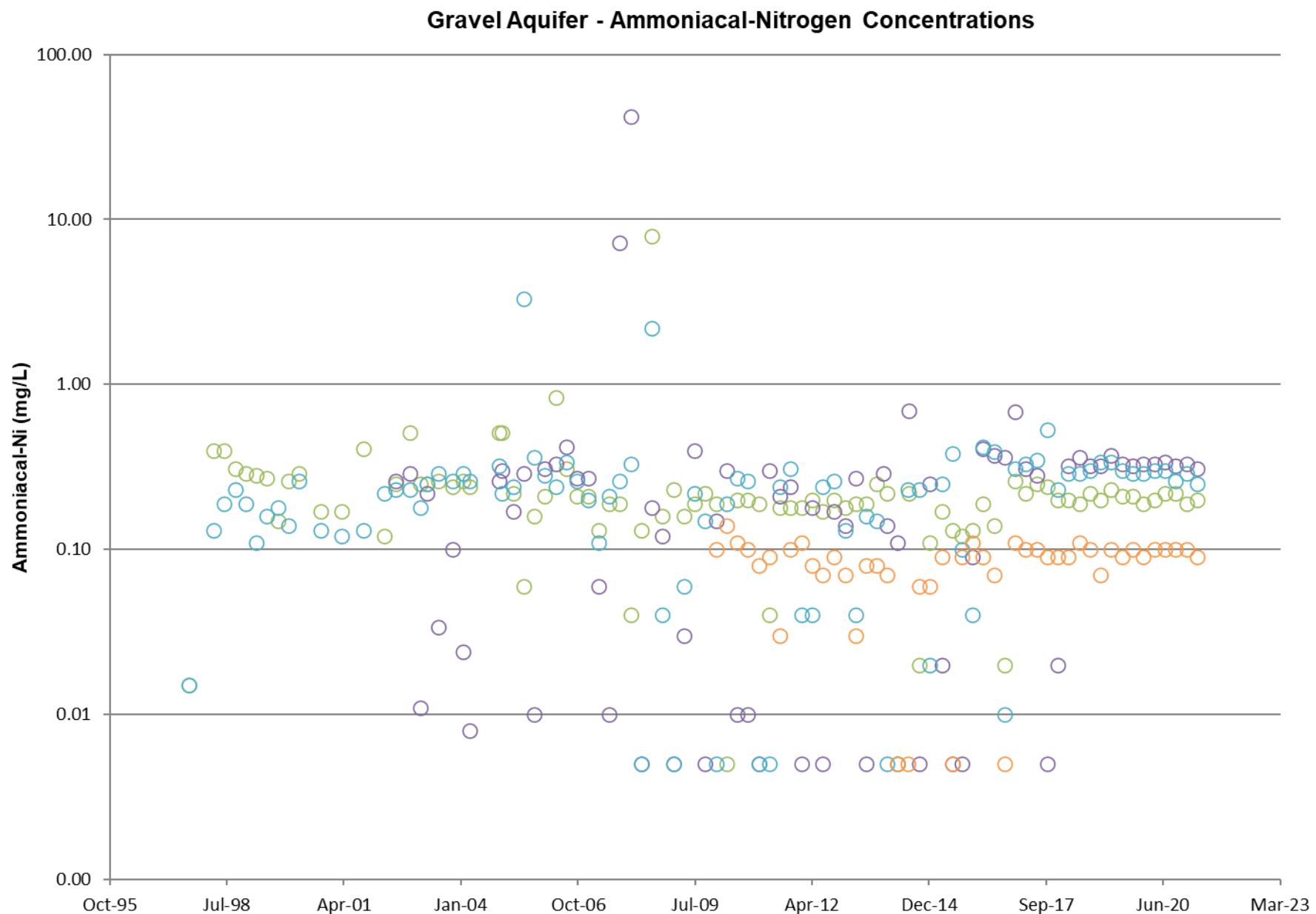


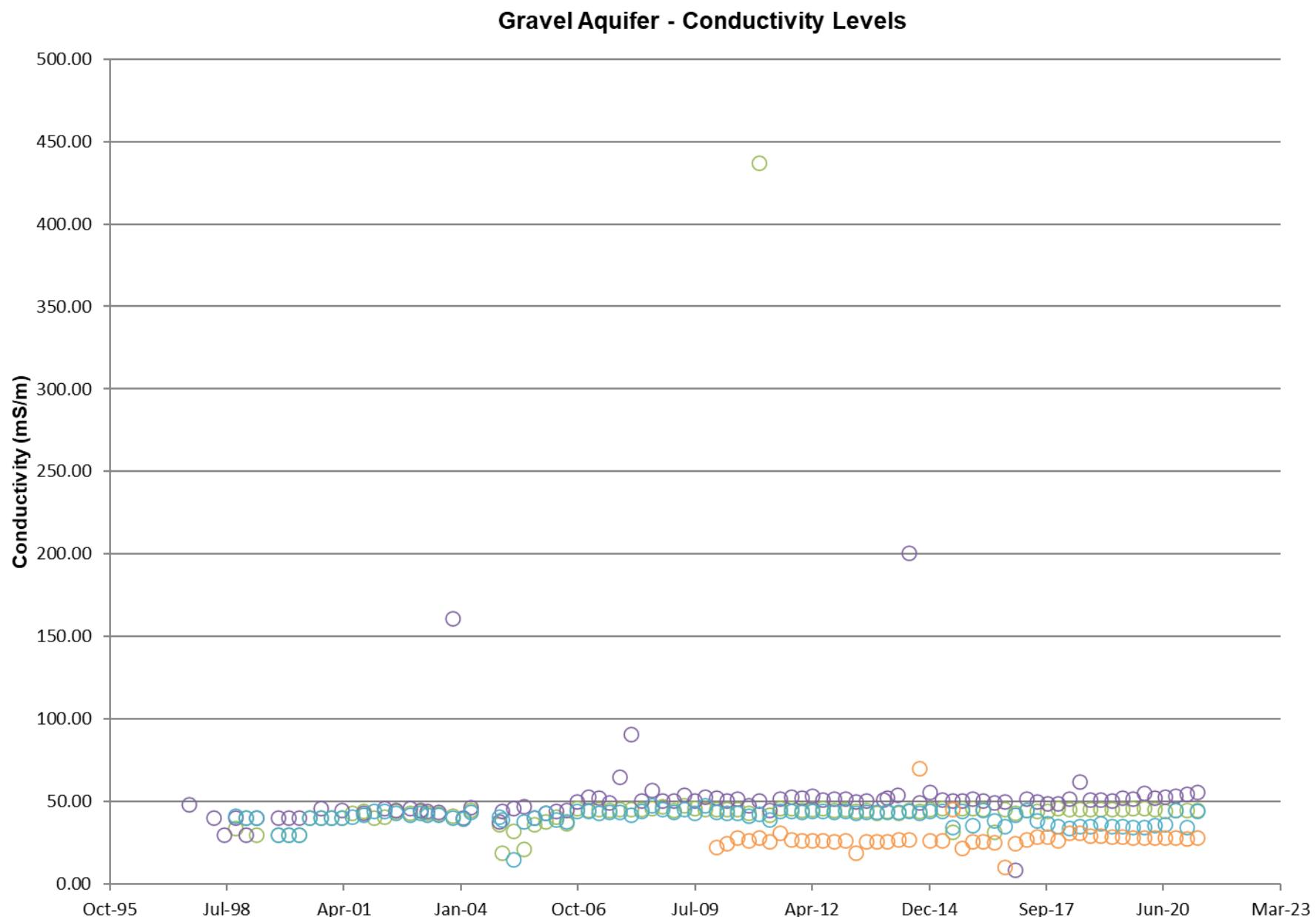




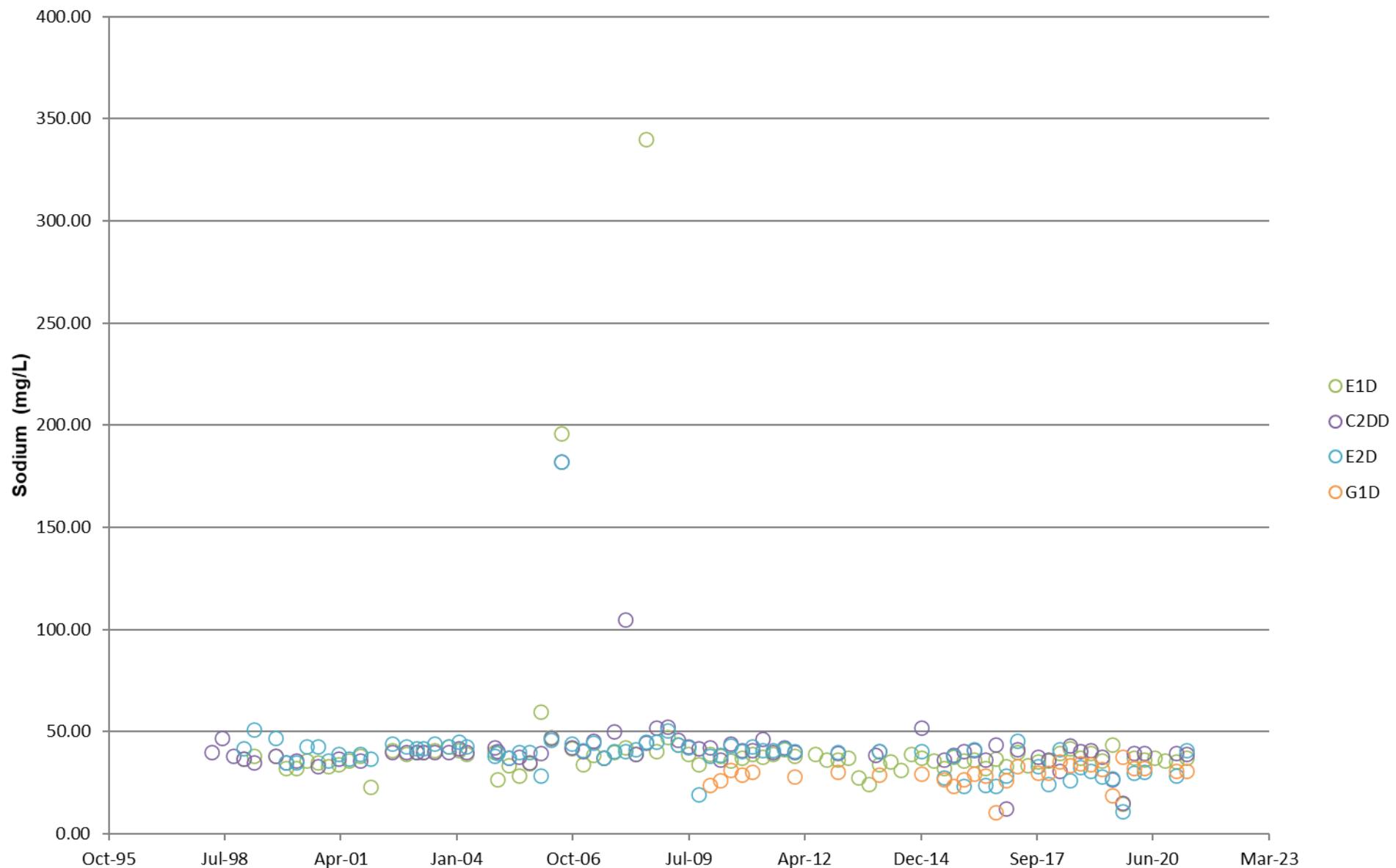
Gravel Aquifer - Chloride Concentrations

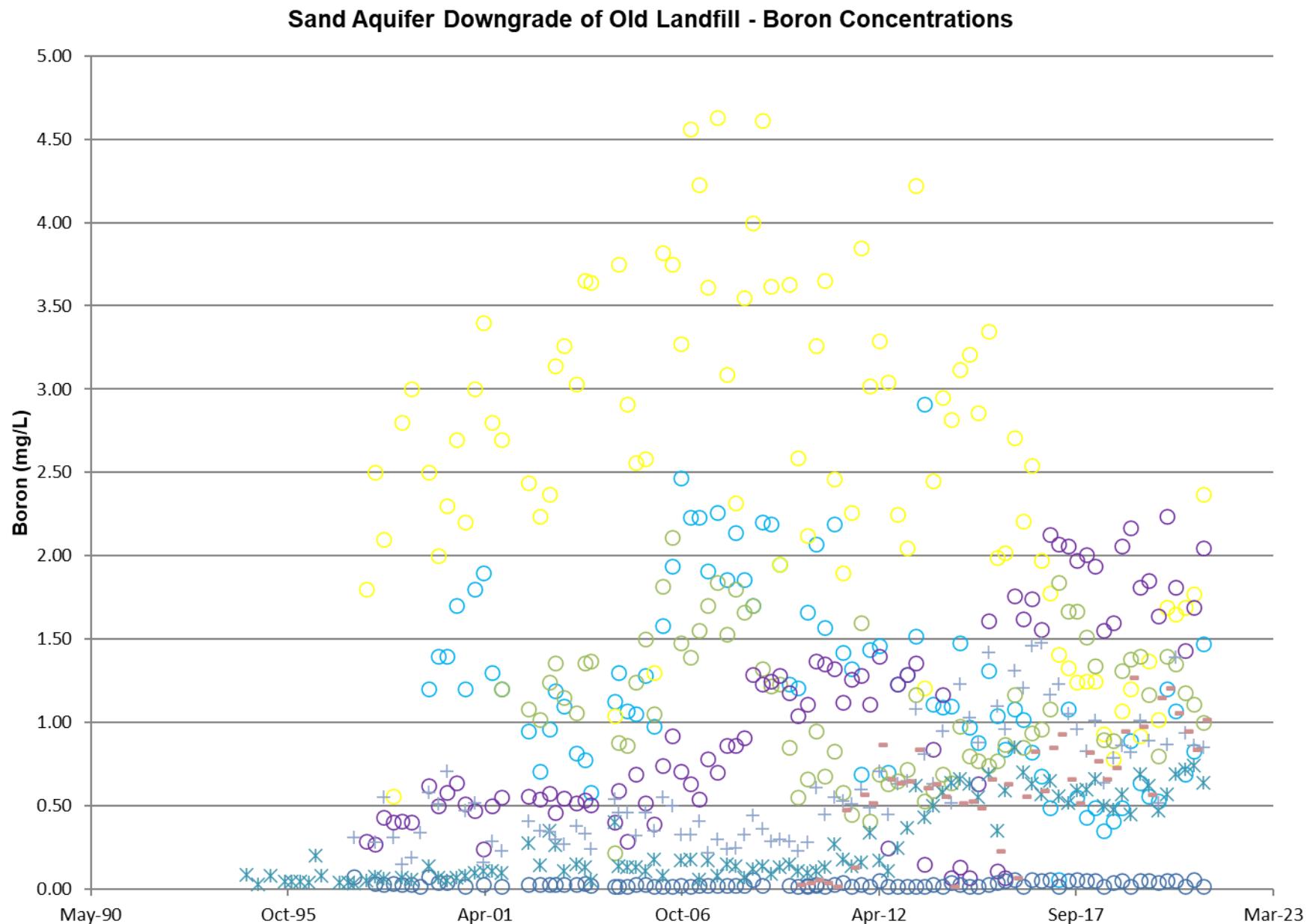


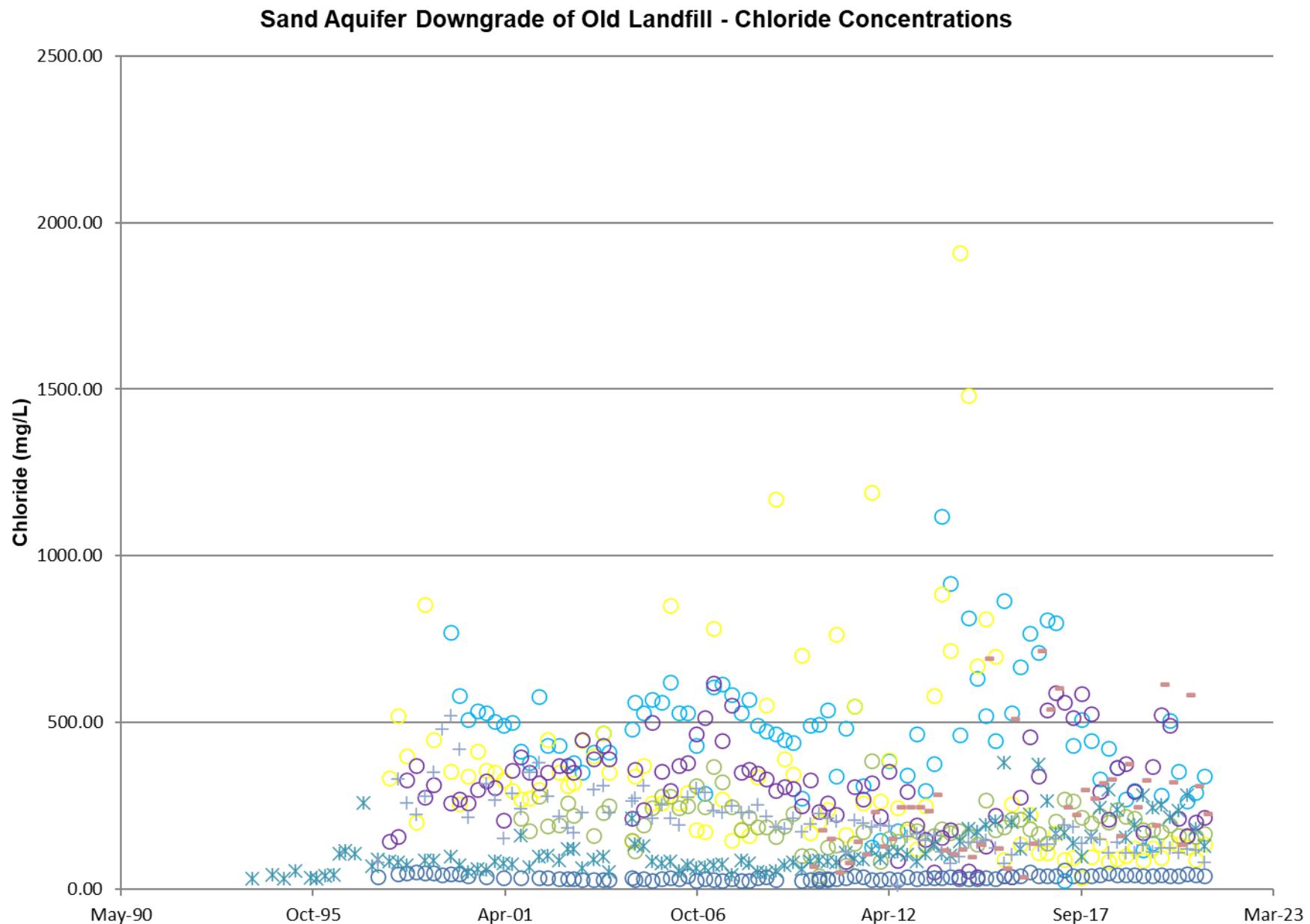


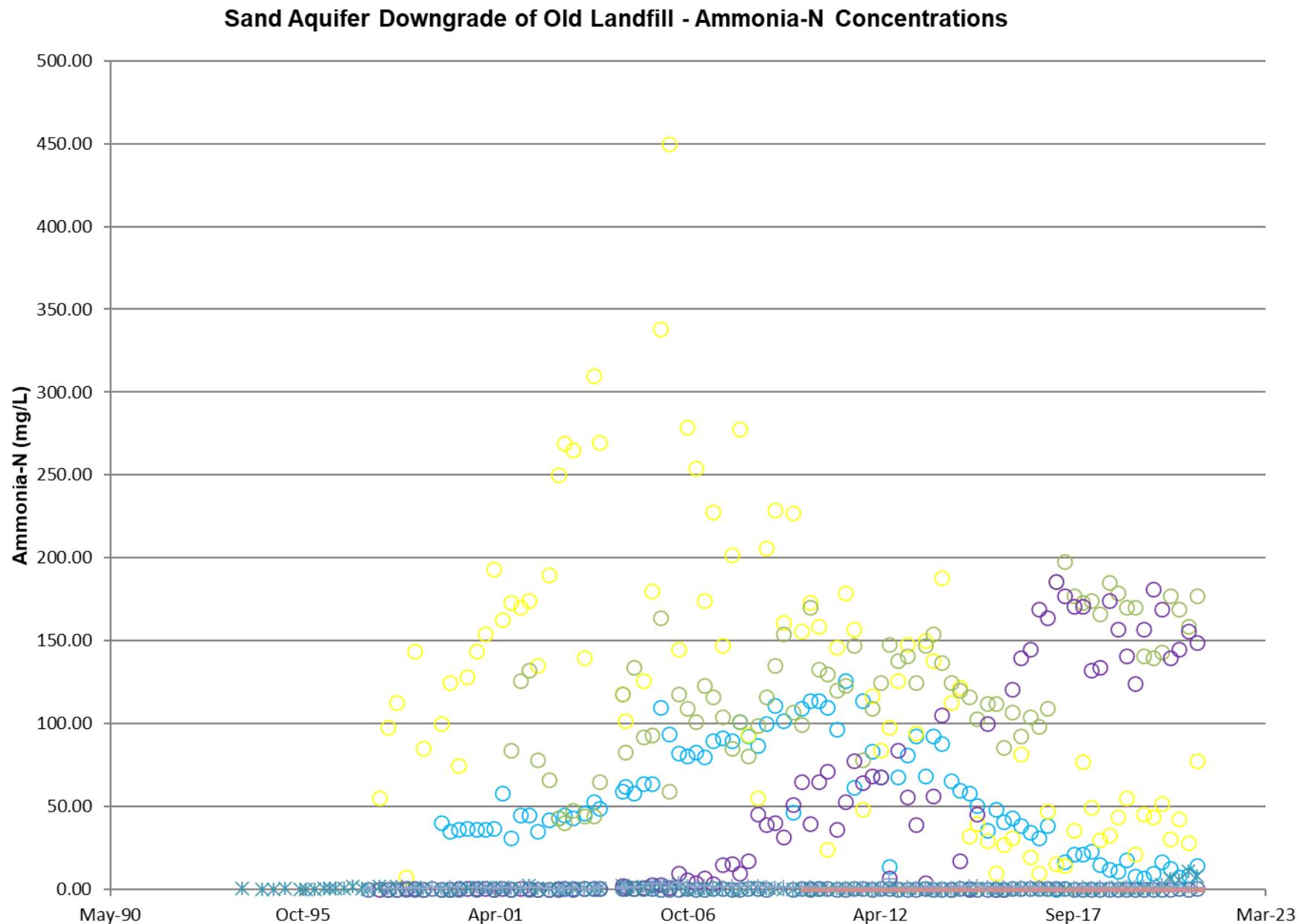


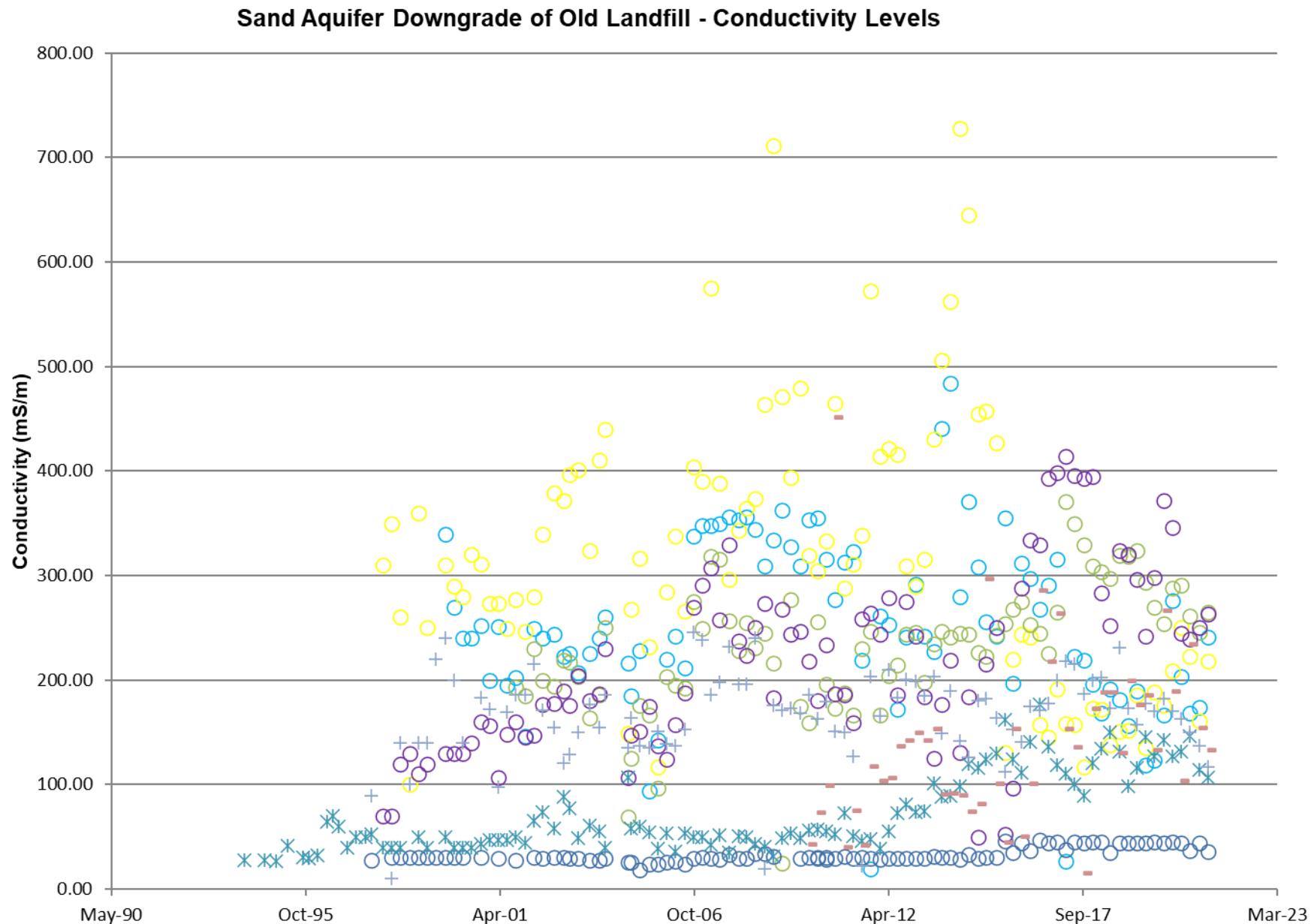
Gravel Aquifer - Sodium Levels

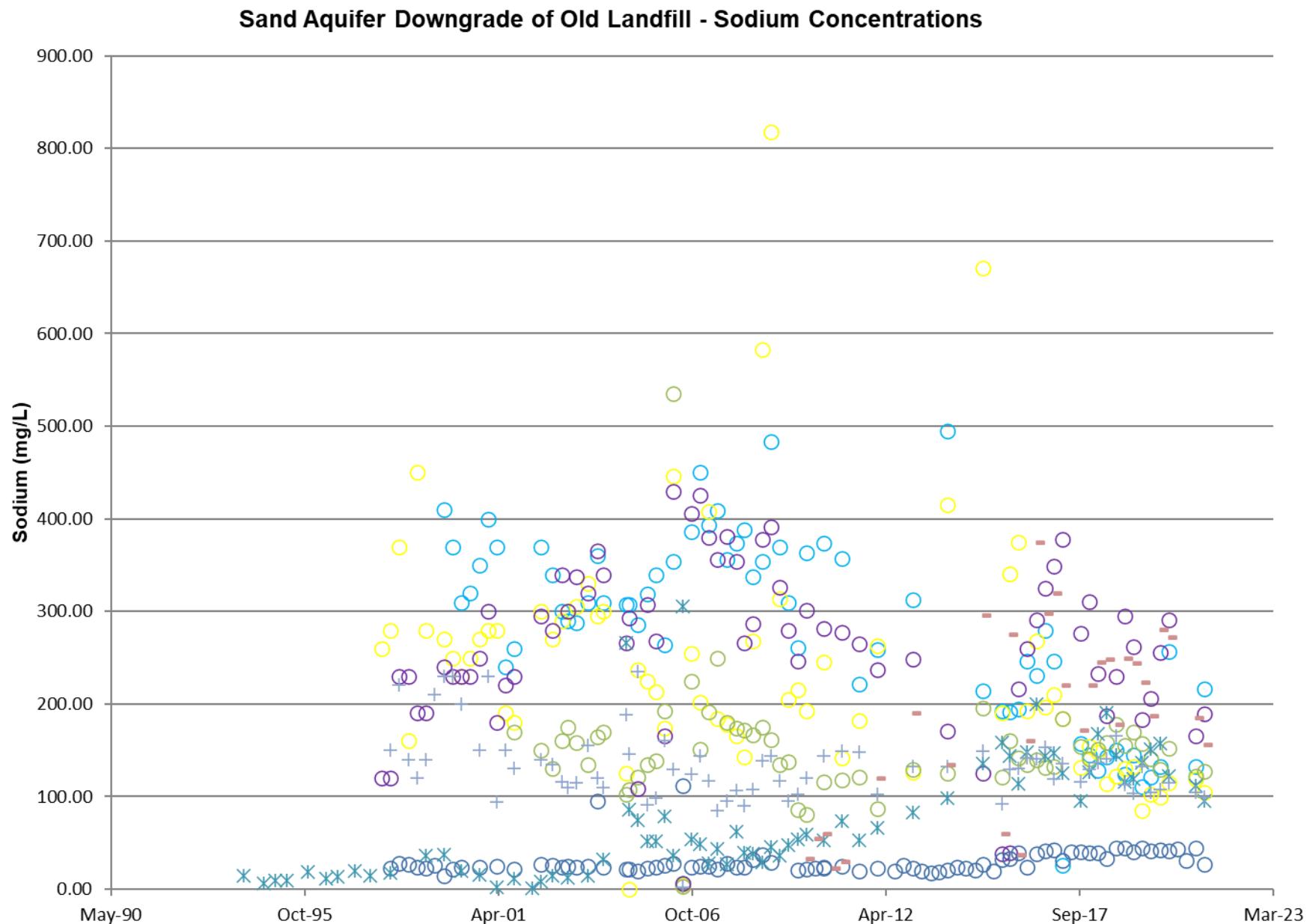


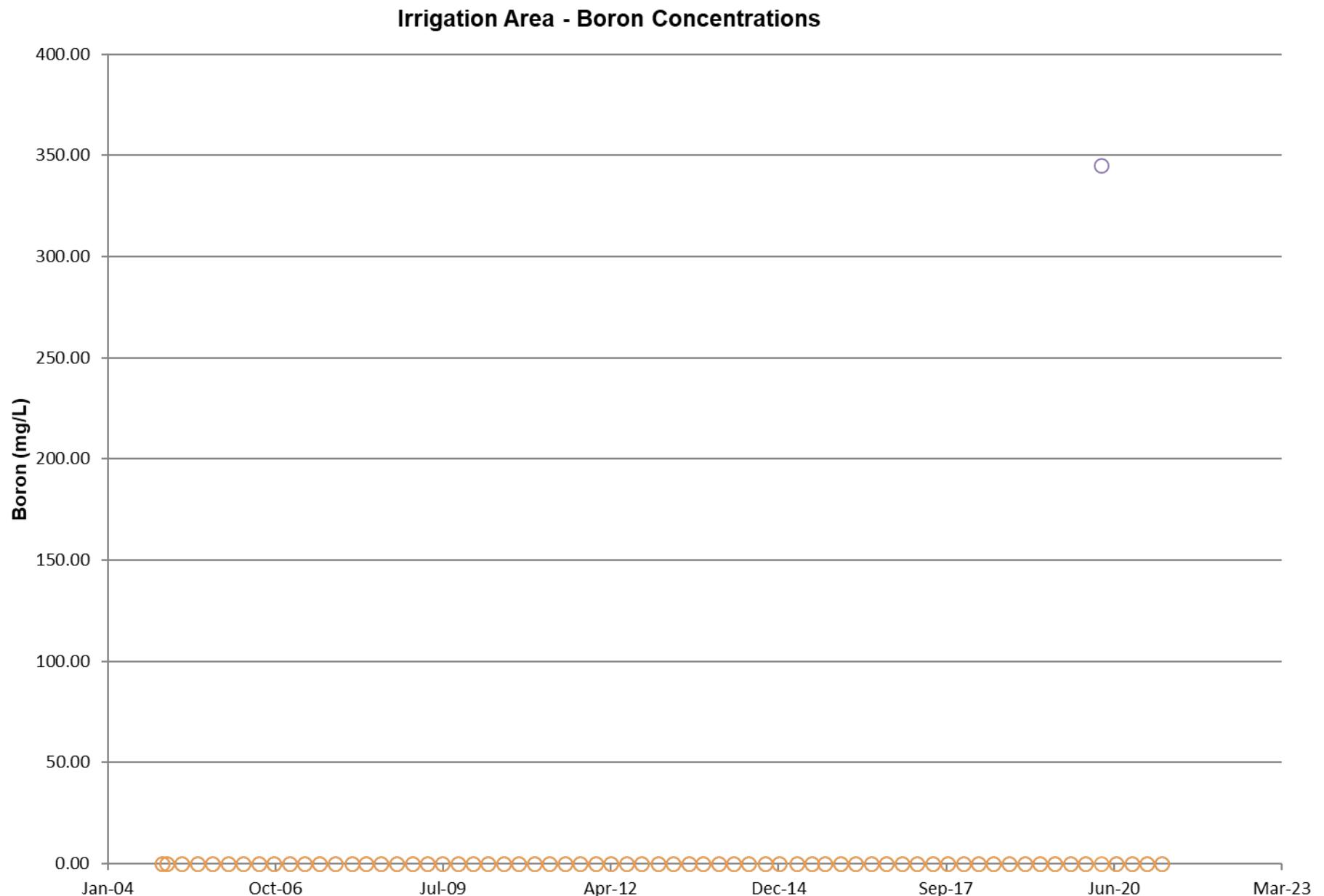


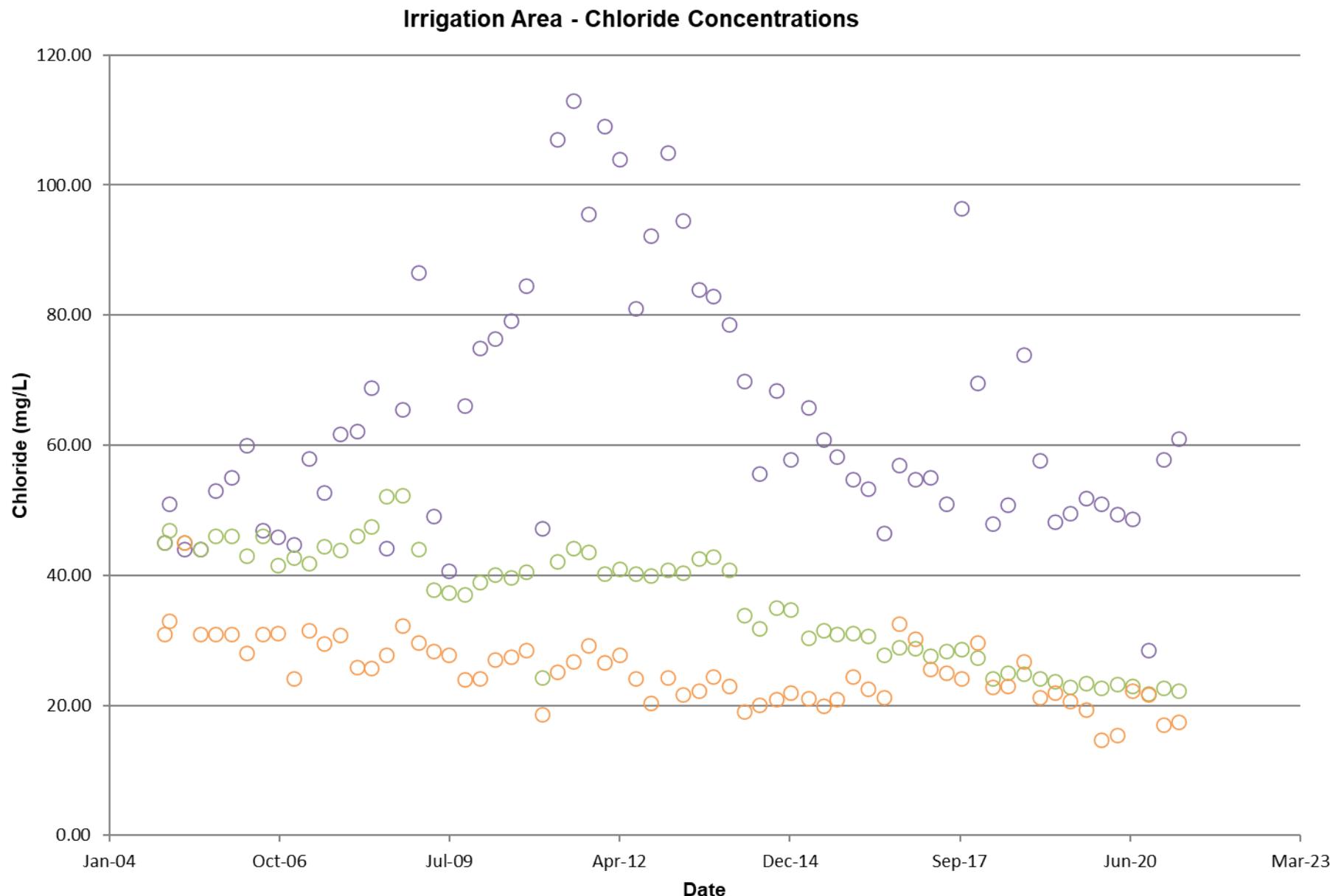


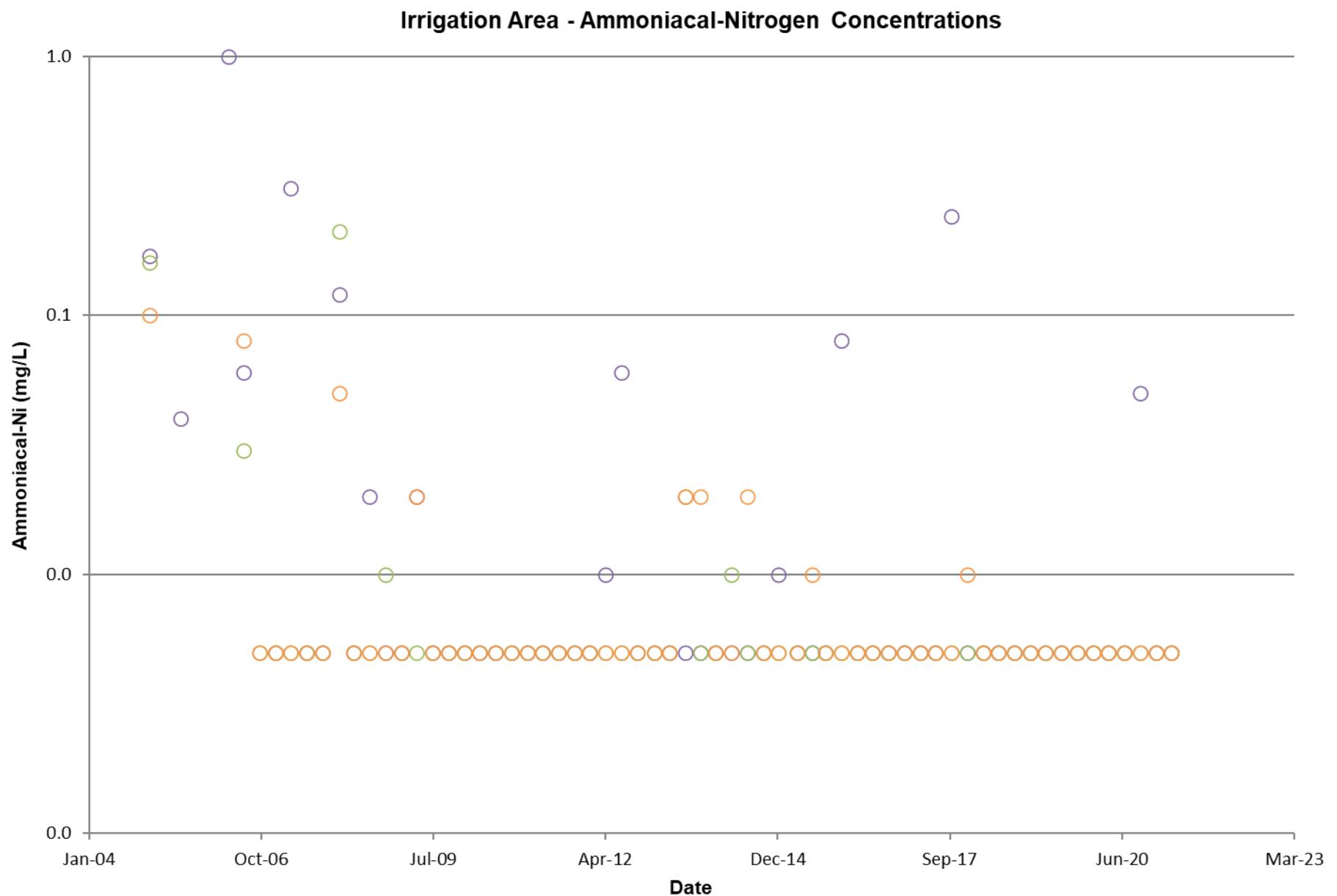


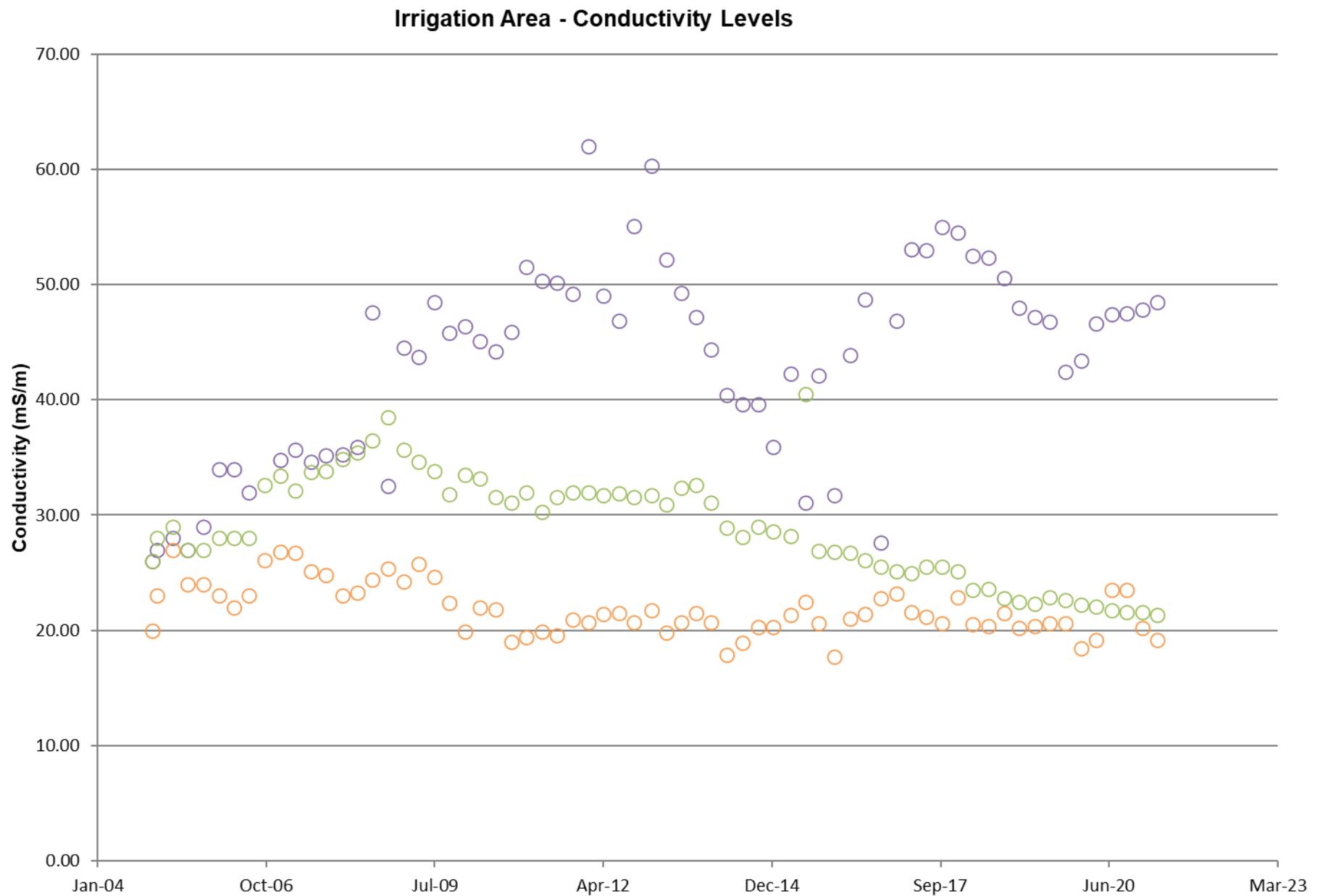


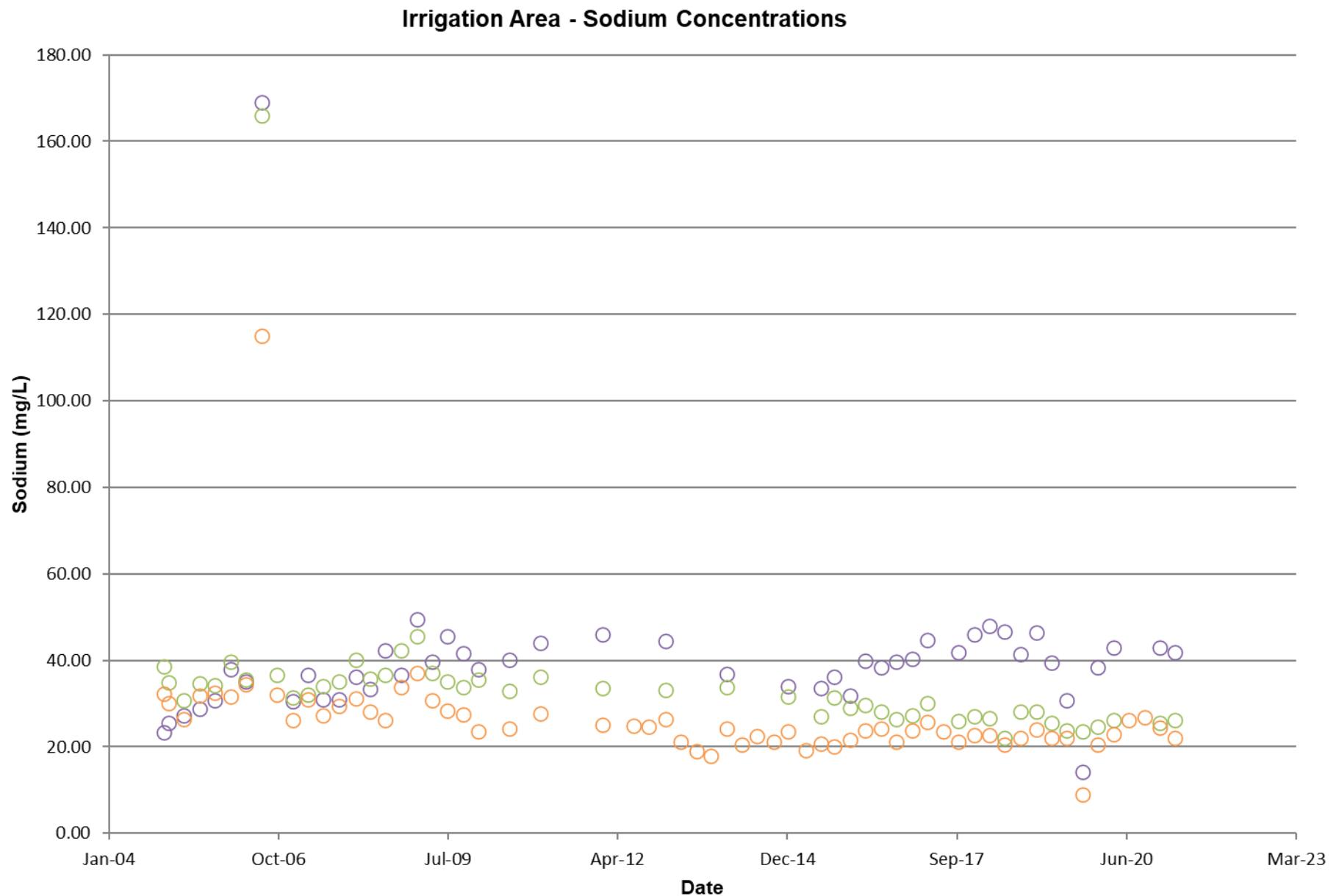


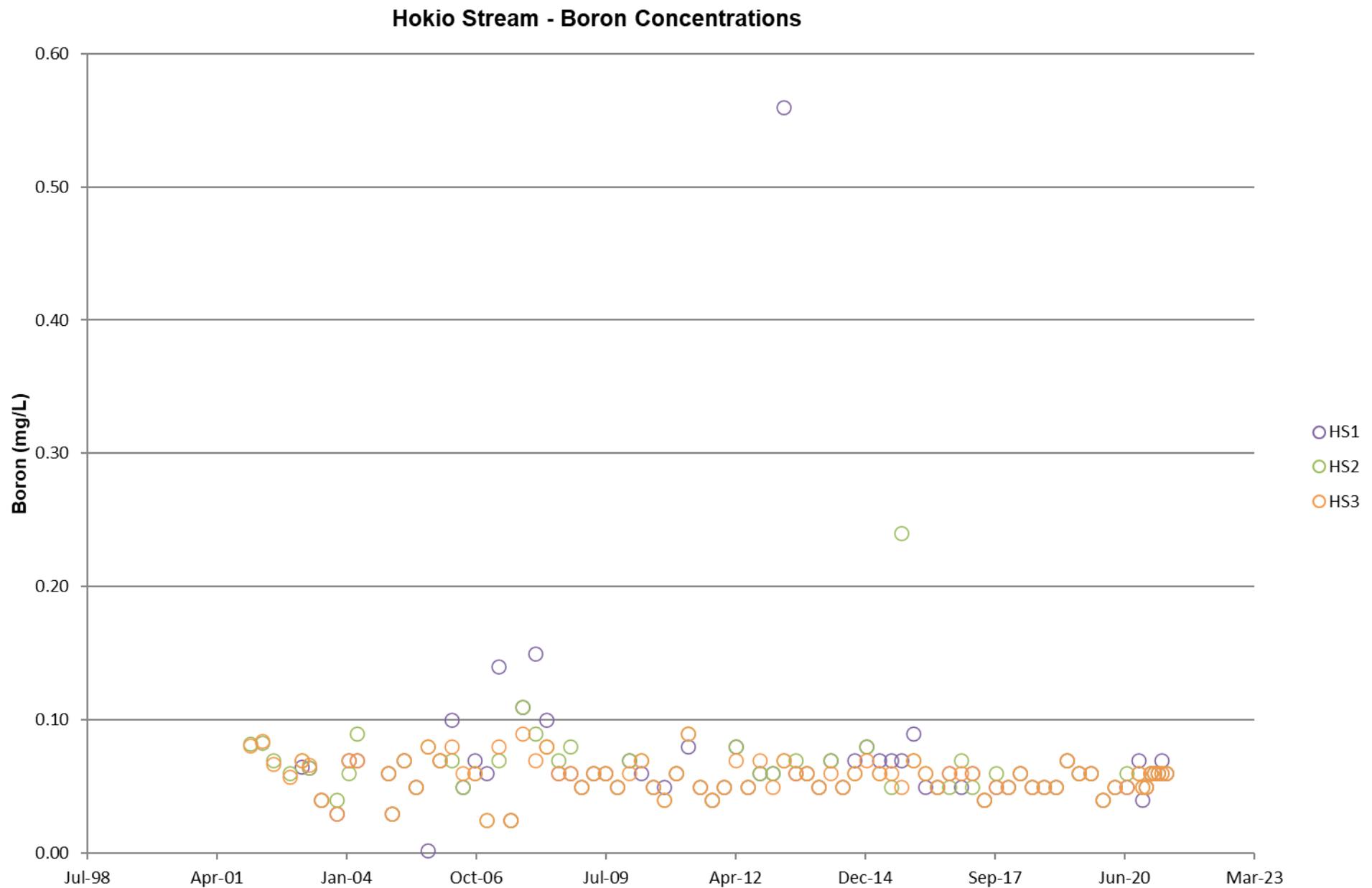


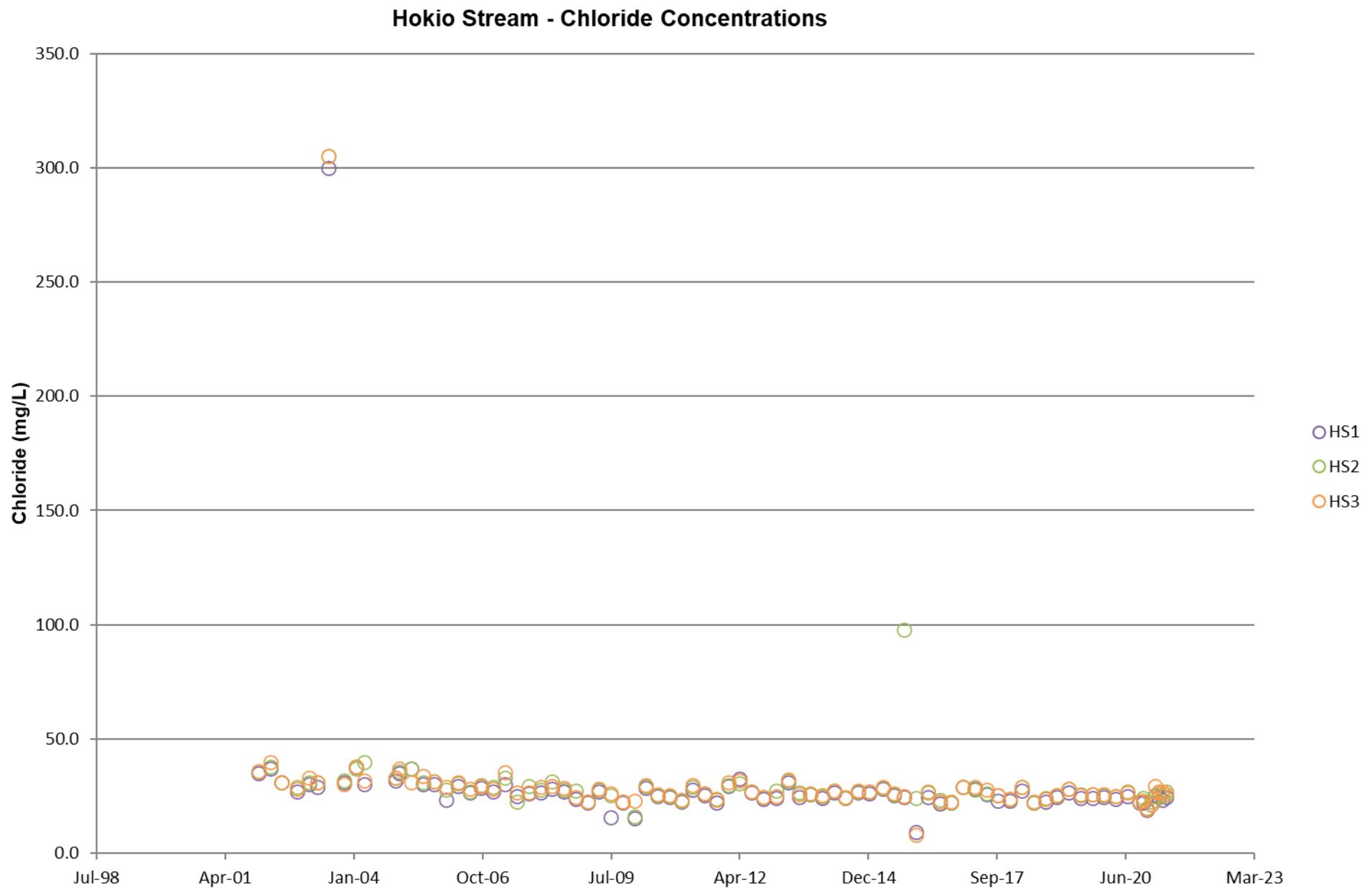




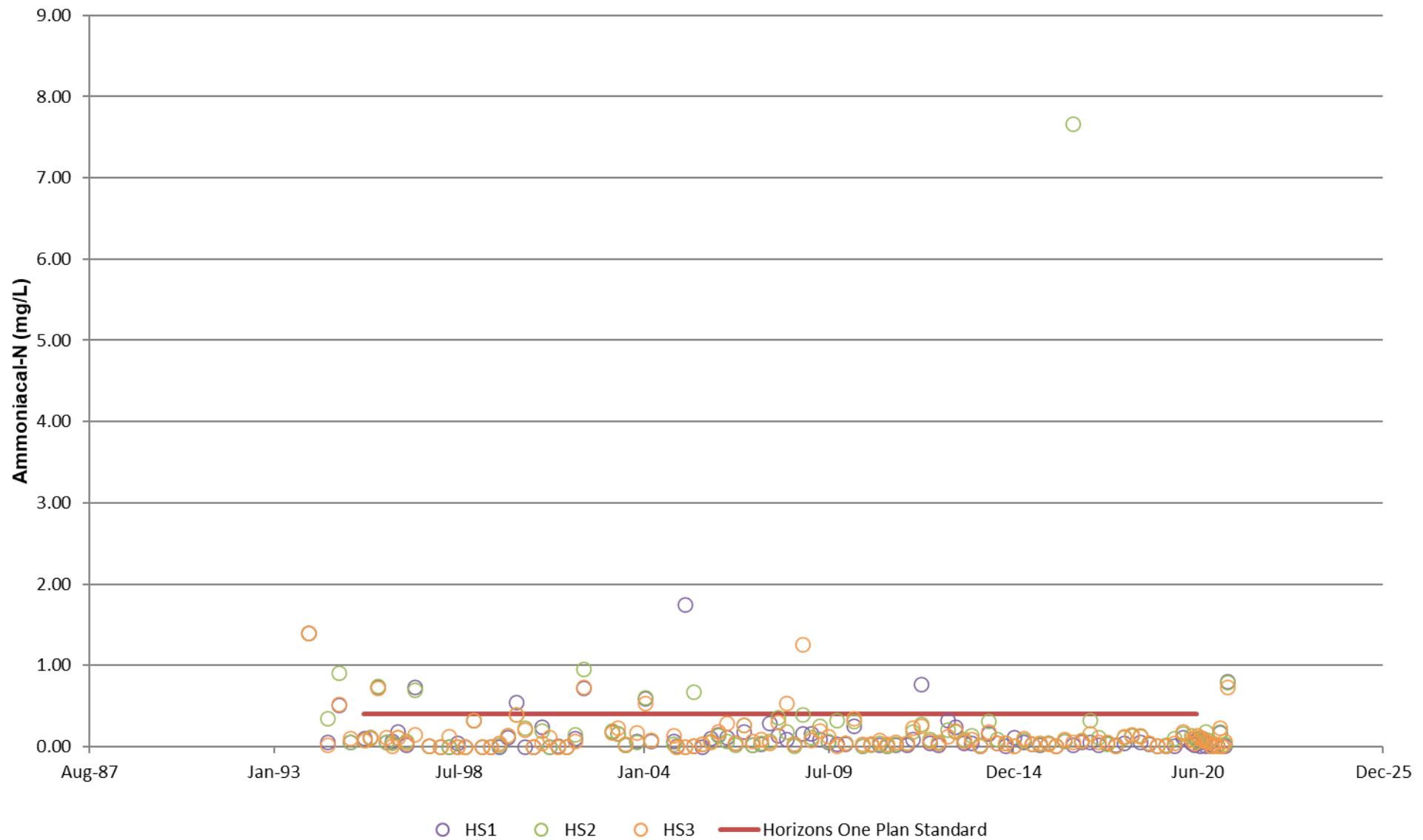


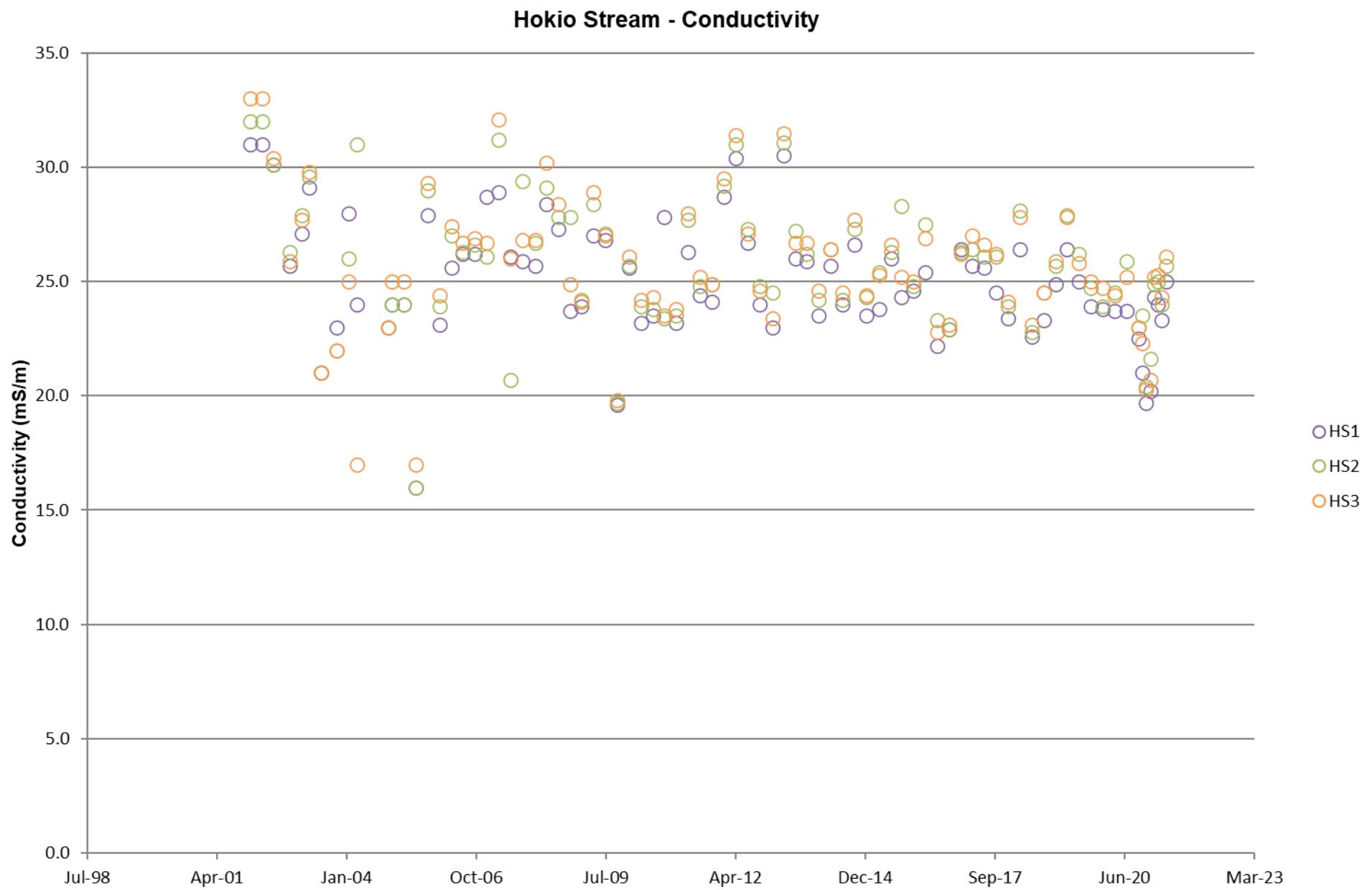




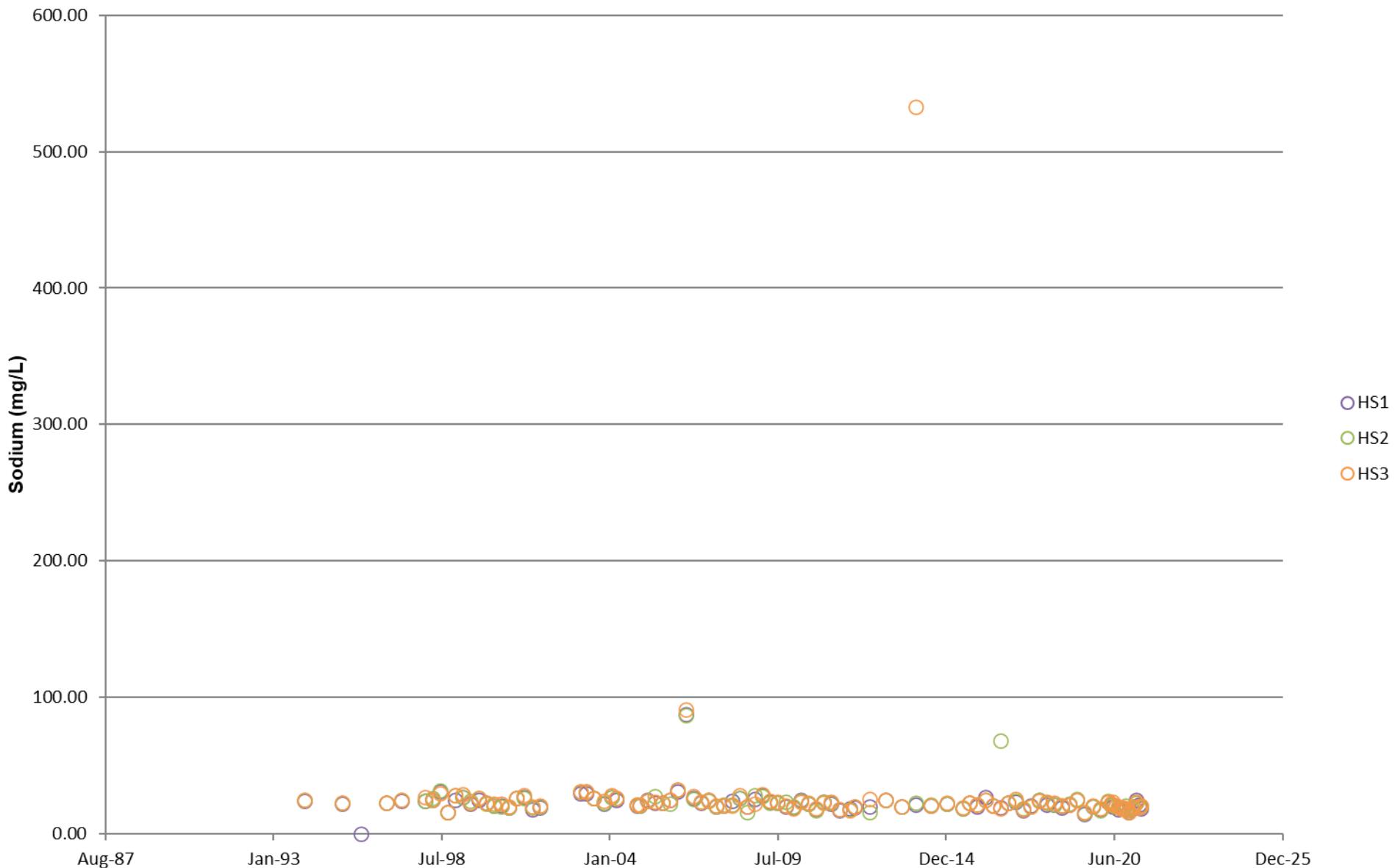


Hokio Stream - Ammoniacal-N Concentrations





Hokio Stream Sodium Concentrations



LEVIN LANDFILL MAY 2021 QUARTERLY GROUNDWATER, SURFACE WATER, AND LEACHATE MONITORING REPORT

APPENDIX E GAS SAMPLING RESULTS AT GW BORES



Created	Borehole	Methane (CH ₄)	Carbon Dioxide (CO ₂)	Hydrogen Sulphide (H ₂ S)	Oxygen (O ₂)	Air temperature °C
08-04-21 11:30	Levin Landfill: Levin G2s	0.00	0.03	0	20.8	20
08-04-21 11:42	Levin Landfill: Levin B1	0.00	0.11	0	20.5	19
08-04-21 11:52	Levin Landfill: Levin Landfill Leachate	0.00	0.05	0	20.7	20
08-04-21 12:00	Levin Landfill: Levin D6	0.00	0.1	0	20.3	20
08-04-21 12:28	Levin Landfill: Levin F1	0.00	0.05	0	21	18
08-04-21 12:55	Levin Landfill: Levin G1d	0.00	0.05	0	20.4	18
08-04-21 13:00	Levin Landfill: Levin G1s	0.00	0.13	0	20.5	18
08-04-21 13:12	Levin Landfill: Levin D1	0.00	0.15	0	20.1	20
08-04-21 13:20	Levin Landfill: Levin D2	0.02	0.36	0	19.3	19
08-04-21 13:40	Levin Landfill: Levin F2	0.00	0.45	0	20.2	19
08-04-21 13:50	Levin Landfill: Levin F3	0.00	0.08	0	20.8	19
08-04-21 14:00	Levin Landfill: Levin D3	0.00	0.06	0	20.8	19
08-04-21 14:20	Levin Landfill: Levin D5	0.00	0.14	0	20.8	19
08-04-21 14:30	Levin Landfill: Levin D4	0.00	0.09	0	20.8	19
08-04-21 14:35	Levin Landfill: Levin E1s	0.00	0.06	0	20.9	19
08-04-21 14:45	Levin Landfill: Levin E1d	0.00	0.12	0	20.8	19
08-04-21 14:55	Levin Landfill: Levin C1	0.00	0.71	0	20.3	21
09-04-21 12:50	Levin Landfill: Levin E2d	0.00	0.02	0	20.8	20
09-04-21 13:15	Levin Landfill: Levin C2ds	0.00	0.13	0	20.4	20
09-04-21 13:20	Levin Landfill: Levin C2dd	0.00	0.08	0	20.5	20
09-04-21 13:25	Levin Landfill: Levin C2	0.00	0	0	20.5	21
09-04-21 13:35	Levin Landfill: Levin B2	0.00	4.24	0	14.5	20
09-04-21 14:55	Levin Landfill: Levin E2s	0.00	0.03	0	20.8	20
12-04-21 8:25	Levin Landfill: Levin Xs2	0.00	0.05	0	20.7	18
12-04-21 9:05	Levin Landfill: Levin Xs1	0.00	0.02	0	20.9	19
12-04-21 10:30	Levin Landfill: Levin Xd1	0.00	0	0	20.8	18
09-06-21 13:05	Levin Landfill: Levin B3s	0.00	0	0	20.6	20

CREATING COMMUNITIES

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

New Zealand offices:

Alexandra, Auckland, Balclutha, Christchurch, Dunedin,
Gisborne, Greymouth, Hamilton, Hastings, Napier,
Nelson, Palmerston North, Queenstown, Tauranga,
Wellington, Whangārei

Stantec

118 Fitzherbert Avenue, Palmerston North 4410

PO Box 13-052, Armagh, Christchurch, 8141

New Zealand: +64 6 357 4034 | www.stantec.com

