LEVIN LANDFILL APRIL 2020 QUARTERLY GROUNDWATER, SURFACE WATER AND LEACHATE MONITORING REPORT

PREPARED FOR HOROWHENUA DISTRICT COUNCIL

June 2020



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 Horizons Regional Council and other persons for an application for permission or approval to fulfil a legal requirement.

QUALITY STATEMENT

PROJECT MANAGER	PROJECT TECHNICAL	. LEAD
Roger Hulme	Phil Landmark	
PREPARED BY		
Matthew Chung	Q	27/05/2020
CHECKED BY	CALIF	
Paul Heveldt, Julia O'Brien (data entry)		27/05/2020
REVIEWED BY		
Phil Landmark	_ Jandnerk	24/06/2020
APPROVED FOR ISSUE BY	QL	
Roger Hulme	Fleen	24/06/2020

PALMERSTON NORTH

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

REVISION SCHEDULE

			Signature or Typed Name (documentation on file)					
Rev Date	Description	Prepared by	Checked by	Reviewed by	Approved by			
01	29/05/2020	Draft for comment	Matthew Chung	Matthew Chung, Julia O'Brien (data entry)	Paul Heveldt, Phil Landmark	Roger Hulme		
02	24/06/2020	Final	Matthew Chung; updated by Phil Landmark	Matthew Chung, Julia O'Brien (data entry)	Paul Heveldt, Phil Landmark	Roger Hulme		

 Stantec
 Levin Landfill April 2020 Quarterly Groundwater, Surface Water and Leachate Monitoring Report
 June 2020

 Status: Final
 Project No.: 310101088
 Our ref: Levin LF Apr 2020 Quarterly Report_Final for Client.docx

Executive Summary

Horowhenua District Council (HDC) is required to carry out quarterly compliance monitoring of groundwater and surface water at the Levin Landfill, as part of the conditions on Resource Consents DP6009, DP6010, DP6011 and DP102259. This report summarises the findings for the April 2020 quarterly monitoring event, including monitoring results for:

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

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

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

Samples were collected from 23 groundwater bores, the landfill leachate effluent pond and five surface water sites during April 2020 from around and on the Levin Landfill, and were analysed for the comprehensive parameters set out in Discharge Permit 6010.

These samples were collected progressively over an 8-day period, which is an acceptable timeframe over which to obtain samples at such a spatially diverse set of monitoring locations.

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) and 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 April 2020 monitoring results have been assessed against these limits, where they are applicable.

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

- The ANZECC LDW guideline values for E. coli in the shallow aquifer (at bore D6) was significantly exceeded. This was the highest recorded value to date and is somewhat anomalous, given there has been no detection of faecal coliforms for over a year.
- Exceedance of DWSNZ MAV for manganese (at bore C2DD) in the deep gravel aquifer. This is a normal occurrence for this bore.
- The ANZECC LDW guideline values for dissolved boron in the irrigation area (at bore F1) was exceeded. The value was so high compared to previous results that it should be regarded as being anomalous.
- The ANZECC AE 95% trigger value for ammoniacal-N was exceeded at Tatana Property drain (TD1). This was within the range previously monitored.
- The ANZECC AE 95% trigger value for dissolved copper was exceeded at two monitoring locations within Hokio Stream (HS2, and HS3). The values were slightly higher than normal but still within the historic range.

The April 2020 results were also considered within 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.

As required under the comprehensive monitoring schedule, all monitoring bores were analysed for typical semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs). All parameters detected for these groups of determinands were below the DWSNZ MAVs.

Results from a sample of effluent taken from the leachate pond were within the range of data obtained from previous monitoring events at the pond and are generally well below those recorded at typical Class 1 landfills in New Zealand.

Horowhenua District Council

Levin Landfill April 2020 Quarterly Groundwater, Surface Water and Leachate Monitoring Report

CONTENTS

Execut	ive Summaryi
1.	Introduction1
2.	Groundwater and Surface Water Monitoring1
2.1	Sample Analysis
2.2	Background Groundwater Quality
2.3	Groundwater Quality Hydraulically Down-Gradient of the New Landfill 4
2.4	Impact of Old Landfill on Groundwater Quality7
2.5	Groundwater Quality Down-Gradient of the Irrigation Area
2.6	Leachate Effluent Results
2.7	Tatana Property Drain
2.8	Hokio Stream
3.	Discussion
3.1	Sampling Quality Control and Assurance
3.2	Background Groundwater Quality
3.3	Shallow Aquifer Groundwater Quality
3.4	Deep Aquifer Groundwater Quality
3.5	Leachate Effluent
3.6	Tatana Property Drain
3.7	Hokio Stream
3.8	Consent Compliance
4.	Conclusions

LIST OF TABLES

Table 2-1: Comprehensive Parameters	. 2
Table 2-2: Background Monitoring Results for April 2020	. 3
Table 2-3: D-Series and E1S Monitoring Bore Results for April 2020	. 5
Table 2-4: Results for Monitoring Bores within the Deep Aquifer for April 2020	. 6
Table 2-5: Monitoring Results for Shallow Boreholes Down-Gradient from the Old Landfill for April 2020	. 8
Table 2-6: Results from Monitoring Bores in the Irrigation Area for April 2020	10
Table 2-7: Results from Leachate Effluent Monitoring for April 2020	12
Table 2-8: Tatana Drain Monitoring Results for April 2020	13
Table 2-9: Hokio Stream Monitoring Results for April 2020	14

LIST OF FIGURES

Figure 3-1: Nitrate Nitrogen Concentrations in the D-Series Bores
Figure 3-2: Ammoniacal Nitrogen Concentrations in Shallow Bores Screened in the Leachate Plume 18

APPENDICES

Appendix A	Site Plans
Appendix B	Sampling Schedule
Appendix C	Analytical Results
Appendix D	Historical Result Graphs

1. 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. Until recently, monitoring has been undertaken every three months at 27 locations, as required by the previous resource consent conditions (namely for discharge permit 6010). There were 23 boreholes penetrating the sand and gravel aquifers; three surface water sampling locations within Hokio Stream and a leachate sampling point as shown in the Site Plan in Appendix A. In addition, HDC had agreed to undertake voluntary surface water monitoring at four locations along the Tatana Property drain.

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 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. For simplicity, results from monitoring undertaken prior to July 2010 (when the analyses undertaken were for total metal and nutrient concentrations) have not been compared to the results from July 2010 onwards.

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 is in the process of acting on all the changes. The sampling that was done in the April 2020 sampling round has been in line with what has been done previously, but different 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 2020 quarterly monitoring round.

2. Groundwater and Surface Water Monitoring

2.1 Sample Analysis

Samples were collected by Downer (a contractor to HDC) between 1 and 8 April 2020. Samples were couriered overnight and analysed by Eurofins ELS Ltd in Lower Hutt, Wellington, the following day. The sampling programme for April 2020 - January 2023 is summarised in the schedule in Appendix B.

Groundwater samples taken from the boreholes, surface water samples from Hokio Stream, and samples of landfill leachate effluent were analysed for the comprehensive suite of parameters which are outlined in Table 2-1. Surface water samples collected from the Tatana Property drain were analysed based on a specific parameter list agreed to by Horizons Regional Council, as detailed in Section 2.7. From the April 2020 monitoring round onward, sampling of the Tatana Drain will follow 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 BOD_5 (sc BOD_5) and soluble mercury (g) have each been added to the indicator and comprehensive suites of parameters, and E. coli to the comprehensive suite of parameters. The sc BOD_5 and E. coli parameters replace BOD_5 and faecal coliform respectively. Monitoring of these additional parameters has commenced from the April 2020 sampling round.

Table 2-1: Comprehensive Parameters

Туре	Parameters
Characteristics	pH Electrical Conductivity (EC) Alkalinity Total Hardness Suspended Solids
Oxygen demand	Chemical Oxygen Demand (COD), scBOD5 ⁺
Nutrients*	Nitrate nitrogen (NO3-N) Ammoniacal-nitrogen (NH4-N) Dissolved Reactive Phosphorus (DRP) Sulphate (SO4)
Metals*	Aluminium (Al) Arsenic (As) Cadmium (Cd) Chromium (Cr) Copper (Cu) Iron (Fe)** Magnesium (Mg) Manganese (Mn) Mercury (Hg) Nickel (Ni) Lead (Pb) Zinc (Zn)
Other elements	Boron (B) Calcium (Ca) Chloride (Cl) Potassium (K) Sodium (Na)** Mercury (Mg)+
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

*Soluble carbonaceous BOD₅ (scBOD₅), soluble mercury (Hg) and E. coli added as per revised consent conditions for Discharge Permit 6010, December 2019.

During the April 2020 comprehensive monitoring round, water samples taken from all monitoring bores were also analysed for semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs) as per the discharge consent 6010.

Note regarding interpretation of results below detection limits

For those chemical constituents which were found to be present in concentrations below laboratory detection limits during the reporting period, the results have been set at 50% of the laboratory detection limit, and a median calculated on this basis. 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 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

Water quality from 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, 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.

Determinant	Units	DWSNZ MAV	ANZECC LDW	G1S	G1D	F3
Water level	mBGL	-	-	14.52	15.05	5.43
рН	-	7 to 8.5*	6 to 9	6.9	7.7	7.8
Suspended Solids	mg/l	-	-	2.5	2.5	3.0
Phenol	mg/L	-	-	0.025	0.025	0.025
VFA	mg/L	-	-	2.5	2.5	2.5
TOC	mg/L	-	-	38.4	2.0	1.3
Alkalinity	mg CaCO3/L	-	-	58	59	53
Conductivity	m\$/m	-	-	65.9	28.3	19.2
COD	mg/L	-	-	99	7.5	7.5
scBOD5	mg/L	-	-	0.5	0.5	0.5
E-Coli	CFU/100ml	NIL	100	16	ND	ND
Chloride	mg/L	250*	-	130	31.5	15.4
Nitrate-N	mg/L	11.3	90.3	0.06	0.005	1.11
Sulphate	mg/L	-	-	33.8	20.1	7.03
Ammoniacal-N	mg/L	1.17	-	0.04	0.10	0.005
Hardness	mg CaCO3/L	-	-	59	50	34
Calcium	mg/L	-	1000	11.1	7.83	5.18
Magnesium	mg/L	-	-	7.61	7.51	5.08
Potassium	mg/L	-	-	5.93	6.27	5.11
Sodium	mg/L	200*	-	94.2	32.0	23.0
D.R. Phosphorus	mg/L	-	-	0.038	0.030	0.143
Dissolved Aluminium	mg/L	0.1*	5	0.137	0.002	0.001
Dissolved Arsenic	mg/L	0.01	0.1	0.002	0.003	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	0.001	0.0005	0.0005
Dissolved Copper	mg/L	2	0.4#	0.0086	0.00025	0.0005
Dissolved Iron	mg/L	0.2*	-	3.49	0.44	0.0025
Dissolved Lead	mg/L	0.01	0.1	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	0.4	-	0.0635	0.0703	0.00025

Table 2-2: Background Monitoring Results for April 2020

June 2020 | Status: Final | Project No.: 310101088 | Our ref: Levin LF Apr 2020 Quarterly Report_Final for Client.docx

Determinant	Units	DWSNZ MAV	ANZECC LDW	G1S	G1D	F3
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	0.003	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

Bold - denotes an exceedance of the relevant DWSNZ guidelines.

<u>Underlined</u> – denotes an exceedance of the ANZECC LDW Trigger Values.

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.

The results in Table 2-2 indicate that all background 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 2020 monitoring round:

- pH in bore G1S was below the DWSNZ GV
- E. coli in bore G1S was above the DWSNZ MAV
- Dissolved Aluminium concentration in bore G1S was above the DWSNZ GV
- Dissolved Iron concentrations in bores G1S and G1D were above the DWSNZ GV

It is noted that bores G1S and G1D are background bores and therefore 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.

2.3.1 Shallow Aquifer

Bores D1, D2, D3(r), D4, D5, D6 and E1S (Refer to Site Plan, Appendix A) are located hydraulically upgradient 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 2020 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 was one exceedance of the resource consent conditions during the April 2020 monitoring round:

• E. coli in bore D6 was above the ANZECC LDW.

Determinant	Units	ANZECC LDW	D1	D2	D3(r)	D4	D5	D6	E1S
Water level	mBGL	-	17.23	21.66	4.89	8.25	9.93	16.62	11.51
рН	-	6 to 9		6.3	7.0	7.1	7.4	7.1	7.2
Suspended Solids	mg/l	-		17	3	5	2.5	2.5	7
Phenol	mg/L	-		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
TOC	mg/L	-		13.2	3.1	2.4	2.0	1.0	5.2
Alkalinity	mg CaCO3/L	-		109	56	55	63	73	68
Conductivity	m\$/m	-	Bore	33.6	21.4	31.3	29.9	37.2	27.1
COD	mg/L	-	DI	31	7.5	7.5	7.5	7.5	7.5
scBOD5	mg/L	-	has	1.5	0.5	0.5	0.5	0.5	0.5
E-Coli	CFU/100ml	100	insuffici ent	ND	ND	ND	ND	240	ND
Chloride	mg/L	-	water	32.8	21.7	44.6	29.1	19.8	28.7
Nitrate-N	mg/L	90.3	for	0.005	0.18	0.005	1.18	16.9	0.005
Sulphate	mg/L	-	samples	0.01	6.96	12.5	21.0	4.34	9.1
Ammoniacal-N	mg/L	-	to be	0.49	0.18	0.21	0.005	0.005	0.17
Hardness	mg CaCO3/L	-	collecte d	87	34	62	64	95	59
Calcium	mg/L	1000		15.4	6.81	11.0	11.1	18.0	11.0
Magnesium	mg/L	-		11.8	4.19	8.39	8.86	12.3	7.62
Potassium	mg/L	-		7.10	4.90	6.62	7.83	8.16	6.22
Sodium	mg/L	-		32.6	27.3	31.7	32.5	33.9	28.9
D.R. Phosphorus	mg/L	-		0.038	0.015	0.016	0.096	0.101	0.053
Dissolved Aluminium	mg/L	5		0.014	0.001	0.001	0.001	0.003	0.006
Dissolved Arsenic	mg/L	0.1		0.001	0.011	0.004	0.001	0.001	0.002
Dissolved Boron	mg/L	5		0.04	0.015	0.04	0.04	0.05	0.03
Dissolved Cadmium	mg/L	0.01		0.000 1	0.000 1	0.000 1	0.000 1	0.000 1	0.000 1
Dissolved Chromium	mg/L	1		0.001	0.000 5	0.000 5	0.000 5	0.000 5	0.000 5
Dissolved Copper	mg/L	0.4#		0.000 25	0.000 25	0.000 25	0.000 9	0.005 7	0.000 6
Dissolved Iron	mg/L	-		15.0	2.86	1.51	0.070	0.002 5	4.65
Dissolved Lead	mg/L	0.1		0.000 25	0.000 25	0.000 25	0.000 25	0.000 25	0.000 5
Dissolved Manganese	mg/L	-		0.306	0.176	0.189	0.019 3	0.000 9	0.243
Dissolved Mercury	mg/L	0.002		0.000 25	0.000 25	0.000 25	0.000 25	0.000 25	0.000 25
Dissolved Nickel	mg/L	1		0.000 25	0.000 25	0.000 25	0.000 25	0.000 25	0.000 25
Dissolved Zinc	mg/L	20		0.005	0.001	0.001	0.001	0.004	0.001

Table 2-3: D-Series and E1S Monitoring Bore Results for April 2020

Notes:

Bold – denotes an exceedance of the ANZECC LDW trigger values. 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

2.3.2 Deep Gravel Aquifer

Bores E1D, C2DD, E2D and G1D 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.

Results for the April 2020 compliance monitoring round are presented in Table 2-4. 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.

Table 2-4: Results for Monitoring Bores within the Deep Aquifer for April 2020
--

Determinant	Units	DWSNZ MAV	E1D	C2DD	E2D
Water level	mBGL	-	11.38	3.07	5.79
рН	-	7 to 8.5*	7.7	7.7	7.7
Suspended Solids	mg/l	-	2.5	3	14
Phenol	mg/L	-	0.025	0.025	0.025
VFA	mg/L	-	2.5	2.5	2.5
TOC	mg/L	-	3.1	4.2	2.1
Alkalinity	mg CaCO3/L	-	155	194	76
Conductivity	m\$/m	-	45.5	52.5	35.4
COD	mg/L	-	7.5	7.5	7.5
scBOD5	mg/L	-	0.5	0.5	0.5
E-Coli	CFU/100ml	NIL	ND	ND	ND
Chloride	mg/L	250*	38.7	40.5	47.8
Nitrate-N	mg/L	11.3	0.005	0.005	0.005
Sulphate	mg/L	-	0.01	0.03	12.4
Ammoniacal-N	mg/L	1.17	0.20	0.33	0.30
Hardness	mg CaCO3/L	-	131	168	83
Calcium	mg/L	-	31.8	43.8	23.1
Magnesium	mg/L	-	12.4	14.3	6.14
Potassium	mg/L	-	5.03	6.32	5.67
Sodium	mg/L	200*	36.5	39.4	30.2
D.R. Phosphorus	mg/L	-	0.411	0.667	0.198
Dissolved Aluminium	mg/L	0.1*	0.001	0.001	0.001
Dissolved Arsenic	mg/L	0.01	0.007	0.003	0.001
Dissolved Boron	mg/L	1.4	0.06	0.07	0.015
Dissolved Cadmium	mg/L	0.004	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	0.05	0.0005	0.0005	0.0005
Dissolved Copper	mg/L	2	0.00025	0.00025	0.00025
Dissolved Iron	mg/L	0.2*	0.03	0.02	0.046
Dissolved Lead	mg/L	0.01	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	0.4	0.248	0.583	0.234
Dissolved Mercury	mg/L	0.007	0.00025	0.00025	0.00025
, Dissolved Nickel	mg/L	0.08	0.00025	0.00025	0.00025
Dissolved Zinc	mg/L	1.5*	0.001	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 was **one exceedance of the resource consent conditions** in samples from the deep gravel aquifer during the April 2020 sampling round, i.e.

• Dissolved manganese concentration in bore C2DD was above the DWSNZ MAV.

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 (See Site Plan, Appendix A).

The results from the April 2020 consent monitoring round for these bores are presented in Table 2-5 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 2020 monitoring round and so these **results show compliance with the resource consent conditions**.

Determinant	Units	ANZECC LDW	E2S	B1	B2	B3	C1	C2	C2DS	G2S
Water level	mBGL	-	4.97	1.39	1.65	0.15	0.55	0.47	2.43	2.55
рН	-	6 to 9	7.6	6.9	6.9	7.1	6.7	7.2	7.0	7.0
Suspended Solids	mg/l	-	2.5	3	9	74	40	516	52	8
Phenol	mg/L	-	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
TOC	mg/L	-	2.9	22.8	31.7	70.6	16.6	45.6	32.0	15.6
Alkalinity	mg CaCO3/L	-	146	624	723	1180	249	818	716	427
Conductivity	mS/m	-	44.9	276	209	288	127	346	170	190
COD	mg/L	-	7.5	60	81	213	54	127	89	53
scBOD5	mg/L	-	0.5	0.5	0.5	3	1	3	3	0.5
E-Coli	CFU/100ml	100	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	-	40.7	506	141	194	217	492	125	323
Nitrate-N	mg/L	90.3	0.005	1.50	21.8	0.05	0.005	0.08	0.005	0.005
Sulphate	mg/L	-	0.01	2.85	8.85	0.01	32.6	42.3	0.01	5.86
Ammoniacal-N	mg/L	-	0.25	16.80	51.6	143	2.91	169	1.79	0.02
Hardness	mg CaCO3/L	-	119	670	546	509	306	277	589	304
Calcium	mg/L	1000	26.0	122	117	89.7	52.2	54.7	134	61.0
Magnesium	mg/L	-	13.0	88.9	61.6	69.2	42.6	34.0	61.7	36.8
Potassium	mg/L	-	6.46	29.9	57.6	91.5	16.70	91.5	16.7	25.5
Sodium	mg/L	-	41.2	257	115.0	152	122	291	115	272
D.R. Phosphorus	mg/L	-	0.621	0.105	0.021	0.031	0.011	0.013	0.122	0.018
Dissolved Aluminium	mg/L	5	0.004	0.005	0.009	0.007	0.009	0.041	0.001	0.003
Dissolved Arsenic	mg/L	0.1	0.001	0.001	0.006	0.035	0.0005	0.002	0.003	0.0005
Dissolved Boron	mg/L	5	0.05	1.20	1.69	1.40	0.57	2.24	0.87	1.21
Dissolved Cadmium	mg/L	0.01	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Dissolved Chromium	mg/L	1	0.0005	0.0005	0.001	0.005	0.0005	0.002	0.0005	0.0005
Dissolved Copper	mg/L	0.4#	0.00025	0.0094	0.0031	0.0007	0.0008	0.0017	0.00025	0.0010
Dissolved Iron	mg/L	-	0.047	0.032	0.722	1.03	2.53	0.158	22.5	0.032

Table 2-5: Monitoring Results for Shallow Boreholes Down-Gradient from the Old Landfill for April 2020

June 2020 | Status: Final | Project No.: 310101088 | Our ref: Levin LF Apr 2020 Quarterly Report_Final for Client.docx

Determinant	Units	ANZECC LDW	E2S	B1	B2	B3	C1	C2	C2DS	G2S
Dissolved Lead	mg/L	0.1	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	-	0.386	17.50	4.33	4.84	0.410	0.0650	2.75	0.215
Dissolved Mercury	mg/L	0.002	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	1	0.00025	0.0045	0.0030	0.0136	0.0012	0.0017	0.0029	0.0046
Dissolved Zinc	mg/L	20	0.003	0.005	0.004	0.001	0.001	0.009	0.001	0.006

Notes:

Bold – denotes an exceedance of the ANZECC LDW trigger values. 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.

Semi-Volatile and Volatile Organic Compounds

During the April 2020 comprehensive monitoring round, water samples taken from all monitoring bores were analysed for typical SVOCs (72 compounds) and VOCs (65 compounds). The full laboratory report is included in Appendix C. All compounds detected were at concentrations below the DWSNZ MAV and so the **results comply with the resource consent conditions**.

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. F2 and F3 boreholes are in an area that was set aside for leachate irrigation but 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 2-6 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 was one exceedance of the resource consent conditions during the April 2020 monitoring round:

• Dissolved Boron in bore F1 was above the ANZECC LDW.

Determinant	Units	ANZECC LDW	F1	F2	F3
Water level	mBGL	-	8.38	3.11	5.43
рН	-	6 to 9	7.6	7.2	7.8
Suspended Solids	mg/l	-	2.5	3	3
Phenol	mg/L	-	0.025	0.025	0.025
VFA	mg/L	-	2.5	2.5	2.5
TOC	mg/L	-	5.5	1.6	1.3
Alkalinity	mg CaCO3/L	-	131	53	53
Conductivity	mS/m	-	46.6	22.1	19.2
COD	mg/L	-	16	7.5	7.5
scBOD5	mg/L	-	0.5	0.5	0.5
E-Coli	CFU/100ml	100	ND	ND	ND
Chloride	mg/L	-	49.4	23.2	15.4
Nitrate-N	mg/L	90.3	1.01	0.33	1.11
Sulphate	mg/L	-	5.24	8.97	7.03
Ammoniacal-N	mg/L	-	0.005	0.005	0.005
Hardness	mg CaCO3/L	-	125	37	34
Calcium	mg/L	1000	18.3	6.01	5.18
Magnesium	mg/L	-	19.2	5.41	5.08
Potassium	mg/L	-	8.95	5.45	5.11
Sodium	mg/L	-	42.9	26.1	23.0
D.R. Phosphorus	mg/L	-	0.172	0.148	0.143
Dissolved Aluminium	mg/L	5	0.001	0.002	0.001
Dissolved Arsenic	mg/L	0.1	0.002	0.002	0.002
Dissolved Boron	mg/L	5	345	0.03	0.015

Table 2-6: Results from Monitoring Bores in the Irrigation Area for April 2020

Determinant	Units	ANZECC LDW	F1	F2	F3
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#	0.0030	0.0013	0.0005
Dissolved Iron	mg/L	-	0.0025	0.018	0.0025
Dissolved Lead	mg/L	0.1	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	-	0.0044	0.0360	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	0.002	0.001

Notes:

Bold – denotes an exceedance of the ANZECC LDW trigger values.

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 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 2-7). The full laboratory report is included in Appendix C. Table 2-7 shows that the concentrations of monitored parameters for leachate effluent samples collected in April 2020 were within the typical ranges to be expected for this type of landfill, except for Ammoniacal-N which was marginally above the typical range. This does not represent a non-compliance because leachate is not subject to any water quality consent conditions.

Determinant	Units	Typical Leachate Characteristics*	Leachate
		(range)	Effluent
рН		5.9 - 8.5	7.9
Suspended Solids	mg/l	-	35
Phenol	mg/L	-	0.25
VFA	mg/L	-	2.5
TOC	mg/L	-	804
Alkalinity	mg CaCO3/L	-	6750
Conductivity	m\$/m	308 – 27,900	1610
COD	mg/L	84 - 5,090	2330
scBOD5	mg/L	-	98
E-Coli	CFU/100mL	-	24
Chloride	mg/L	45 – 2,584	1210
Nitrate-N	mg/L	-	0.25
Sulphate	mg/L	-	54.8
Ammonia-N	mg/L	3.4 - 1,440	1450
Hardness	mg CaCO3/L	-	522
Calcium	mg/L	-	106
Magnesium	mg/L	-	62.3
Potassium	mg/L	-	648
Sodium	mg/L	50 - 4,000**	993
D.R. Phosphorus	mg/L	-	13.0
Dissolved Aluminium	mg/L	-	0.586
Dissolved Arsenic	mg/L	-	0.388
Dissolved Boron	mg/L	0.54 – 20.1	5.69
Dissolved Cadmium	mg/L	-	0.0010
Dissolved Chromium	mg/L	-	0.709
Dissolved Copper	mg/L	-	0.0073
Dissolved Iron	mg/L	1.6 – 220	5.25
Dissolved Lead	mg/L	0.001 - 0.42	0.0025
Dissolved Manganese	mg/L	0.3 - 45***	1.04
Dissolved Mercury	mg/L	0.2 - 50	0.0025
Dissolved Nickel	mg/L	0.02 - 2.05**	0.125
Dissolved Zinc	mg/L	-	0.068

Table 2-7: Results from Leachate Effluent Monitoring for April 2020

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.

Note that in terms of the revised resource consent conditions, monthly sampling of leachate in accordance with the comprehensive suite of parameters is to occur for a period of two years.

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 the 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 have now reduced the extent of sampling to one location. This is known as 'TD1' and it is the same sampling location as for the previous 'SW1'.

Results from the April 2020 sampling round are presented in Table 2-8 and have been compared with the ANZECC AE¹ 95% trigger values as per the revised resource consent conditions.

Determinant	Units	ANZECC AE (95%)	TD1 (formerly SW1)
рН	-	-	7.1
Suspended Solids	mg/l	-	284
Phenol	mg/L	-	0.025
VFA	mg/L	-	6
TOC	mg/L	-	23.8
Alkalinity	mg CaCO3/L	-	151
Conductivity	mS/m	-	55.7
COD	mg/L	-	75
scBOD5	mg/L	2	3
E-Coli	CFU/100ml	-	140
Chloride	mg/L	-	69.3
Nitrate-N	mg/L	0.16	0.005
Sulphate	mg/L	-	6.71
Ammoniacal-N	mg/L	2.1	4.61
Hardness	mg CaCO3/L	-	115
Calcium	mg/L	-	21.1
Magnesium	mg/L	-	15.0
Potassium	mg/L	-	15.5
Sodium	mg/L	-	51.3
D.R. Phosphorus	mg/L	-	0.024
Dissolved Aluminium	mg/L	0.055	0.009
Dissolved Arsenic	mg/L	0.024	0.001
Dissolved Boron	mg/L	-	0.18
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	-	1.26
Dissolved Lead	mg/L	0.0034	0.00025
Dissolved Manganese	mg/L	1.9	0.200
Dissolved Mercury	mg/L	0.0006	0.00025
Dissolved Nickel	mg/L	0.011	0.0009
Dissolved Zinc	mg/L	0.008	0.001

Table 2-8: Tatana Drain Monitoring Results for April 2020

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.

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

There was **one exceedance of the resource consent conditions** in samples from the Tatana Drain property at TD1 during the April 2020 sampling round for:

• Ammoniacal-N was above the ANZECC AE 95% trigger value.

2.8 Hokio Stream

Surface water grab samples are obtained from Hokio Stream at sites HS1, HS2 and HS3 (refer to Appendix A) to investigate whether groundwater containing leachate is having an adverse environmental effect on the stream. Site HS1 is situated up-stream of the old landfill, HS2 is situated alongside the old landfill and upstream 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 indicator parameters every six months (as shown in Appendix B).

Results from the April 2020 sampling round are presented in Table 2-9 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, and a new monitoring location 'HS1A' located further upstream from HS1, have now all been added as per the revised Resource Consent conditions.

The revised conditions are in the process of being implemented and monitoring of these additional parameters and at the new location commenced during the April 2020 monitoring round.

Determinant	Units	ANZECC AE (95%)	Consent Trigger Values (Table C1)	HS1A (new)	HS1	HS2	HS3
рН	-	-	-	7.8	7.7	7.7	7.6
Suspended Solids	mg/l	-	-	23	39	24	21
Phenol	mg/L	0.320	-	0.025	0.025	0.025	0.025
VFA	mg/L	-	-	2.5	2.5	2.5	2.5
TOC	mg/L	-	-	8.1	7.9	7.6	7.8
Alkalinity	mg CaCO3/L	-	-	61	61	65	65
Conductivity	m\$/m	-	-	26.2	26.4	27.9	27.8
COD	mg/L	-	-	24	28	21	23
scBOD5	mg/L	2	Monthly Ave. 2	0.5	0.5	0.5	0.5
E-Coli	CFU/100 ml	-	-	320	830	790	410
Chloride	mg/L	-	-	26.6	26.6	28.0	28.3
Nitrate-N	mg/L	0.16	0.16	0.04	0.04	0.08	0.09
Sulphate	mg/L	-	-	18.1	17.9	17.3	17.5
Ammoniacal-N	mg/L	2.1	Max. 2.1 Ave. 0.400	0.03	0.05	0.14	0.09
Hardness	mg CaCO3/L	-	-	69	71	74	73
Calcium	mg/L	-	-	14.7	15.1	15.9	15.8
Magnesium	mg/L	-	-	7.85	8.03	8.35	8.20
Potassium	mg/L	-	-	3.27	3.51	3.62	3.64
Sodium	mg/L	-	-	22.6	23.3	24.3	23.8
D.R. Phosphorus	mg/L	-	-	0.018	0.019	0.020	0.024
Dissolved Aluminium	mg/L	0.055	Med. 0.055	0.011	0.008	0.007	0.005
Dissolved Arsenic	mg/L	0.024	Med. 0.024	0.0005	0.0005	0.0005	0.0005

Table 2-9: Hokio Stream Monitoring Results for April 2020

Determinant	Units	ANZECC AE (95%)	Consent Trigger Values (Table C1)	HS1A (new)	HS1	HS2	HS3
Dissolved Boron	mg/L	0.370	-	0.06	0.07	0.07	0.07
Dissolved Cadmium	mg/L	0.0002	Med. 0.0002	0.0001	0.0001	0.0001	0.0001
Dissolved Chromium (VI)	mg/L	0.001	-	0.0005	0.0005	0.0005	0.0005
Dissolved Copper	mg/L	0.0014	Med. 0.0014	0.0008	0.0009	0.0016	0.0030
Dissolved Iron	mg/L	-	-	0.019	0.011	0.010	0.021
Dissolved Lead	mg/L	0.0034	Med. 0.0034	0.00025	0.00025	0.00025	0.00025
Dissolved Manganese	mg/L	1.9	-	0.0385	0.0339	0.0420	0.0406
Dissolved Mercury	mg/L	0.0006	Med. 0.0006	0.00025	0.00025	0.00025	0.00025
Dissolved Nickel	mg/L	0.011	Med. 0.011	0.00025	0.00025	0.00025	0.00025
Dissolved Zinc	mg/L	0.008	Med. 0.008	0.001	0.001	0.001	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 were **two exceedances of the resource consent conditions** in samples from the Tatana Drain property at TD1 during the April 2020 sampling round for:

• Dissolved copper in samples from HS2 and HS3.

3. Discussion

3.1 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 less valid. This current monitoring round was carried out over an 8-day period between 1 and 8 April 2020. This is a significant improvement over the timespan of previous quarterly monitoring rounds. The length of the monitoring period (8 days to obtain all the April 2020 samples) has progressively shortened since the October and July 2019 rounds when it took over 11 days and 20 days respectively to obtain all the samples. This monitoring period is very close to the recommended period (i.e. obtaining all samples within 7 days) and therefore the results can be interpreted with greater certainty.

3.2 Background Groundwater Quality

Water quality from the natural background water 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). The deeper gravel aquifer (G1D) has pH levels that are slightly higher, but which occasionally dip below the DWSNZ lower guideline of 7.

The E. coli count at the G1S bore (16 CFU/100m)) was above the zero-tolerance level prescribed in the DWSNZ MAV. The aluminium concentration at this bore (0.137mg/L) was marginally above the DWSNZ MAV value of 0.1mg/L. The current results were within the historical result ranges recorded at this bore.

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 2020 sampling round, iron concentrations at G1S and G1D exceeded the DWSNZ GV of 0.2mg/L but were within the historical results ranges recorded at this bore. 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.

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 for

reference background water quality in the future. The suitability of G1S as a background bore will be further assessed prior to issue of the next annual compliance report (for 2019/2020).

3.3 Shallow Aquifer Groundwater Quality

3.3.1 Hydraulically Up-gradient from the Old Landfill

Sampling results from the April 2020 monitoring round show that water quality in the shallow monitoring bores hydraulically up-gradient from the old landfill complies with the discharge consent conditions, except for E. coli at bore D6 (240 CFU/100ml). Scrutiny of the E. coli results during the next monitoring round is recommended to confirm if this result is an anomaly.

Previous quarterly and annual reports noted that nitrate nitrogen concentrations have been consistently elevated in bores D1 and D6 when compared to background (G1S) and bore D4, as shown in Figure 3-1. The concentration of nitrate nitrogen appeared to be steadily increasing until around October 2018 when the concentration began to fall. This recent decreasing trend has persisted throughout the 2019 quarterly monitoring rounds. However, nitrate nitrogen concentrations during the April 2020 monitoring rose to 16.9mg/L from 11.1mg/L during the Jan 2020 monitoring round. There was no nitrate nitrogen result for bore D1 as sampling was not carried out due to insufficient water in the bore.

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

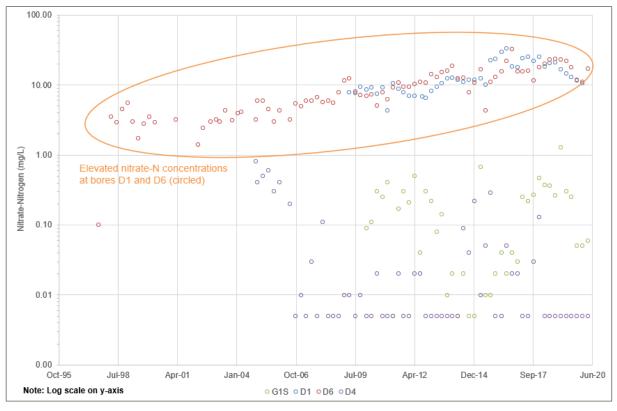


Figure 3-1: Nitrate Nitrogen Concentrations in the D-Series Bores

In previous quarterly reports it was recommended that further investigations be carried out to identify the possible cause (or causes) of the elevated levels of nitrate nitrogen in bores D1 and D6.

Such investigations should include regular monitoring of groundwater levels to be undertaken in all the bores monitored for the 2019-2020 monitoring period so that groundwater flow and the depth of the

unsaturated zone can be assessed. This will enable more conclusions to be drawn as to the source of the elevated nitrate nitrogen concentrations and conductivity values.

3.3.2 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, with the exception for the boron concentration at F1 (345mg/L). Boron concentrations at F1 have consistently been low, or sometimes below the laboratory detection limit. Continued scrutiny of the boron concentration during the next monitoring round is recommended to confirm if this result is anomalous.

3.3.3 Hydraulically Down-gradient from the Old Landfill

During the April 2020 sampling round there were no exceedances of the resource consent conditions for monitored parameter concentrations in samples from the shallow bores.

Bores C1 and G2S are located down gradient of the old landfill to the east. These bores have consistently recorded low concentrations of ammoniacal nitrogen, with G2S often recording concentrations below the detection limit. These bores are likely to be located beyond the eastern edge of the leachate plume.

Bores B1, B2, B3 and C2 all appear to be located and screened within the leachate plume and consistently show significantly elevated concentrations of ammoniacal nitrogen. Historical results for all four bores are plotted in Figure 3-2 below. It is noted that the concentration of ammoniacal nitrogen in bore C2 has been increasing since 2009, while the concentration in B1 has fallen. It is possible that the leachate plume flow direction has "shifted", as a result of flow in one area (or direction) being slower than in others, resulting in a time lag for flow to pass some of the bores. This may have resulted in a different spatial distribution of results from that being observed five years ago. The regular monitoring of the groundwater levels in the bores over the 2019-2020 monitoring period will allow further conclusions to be drawn in the next annual report.

² Irrigation of leachate within this area ceased in October 2008

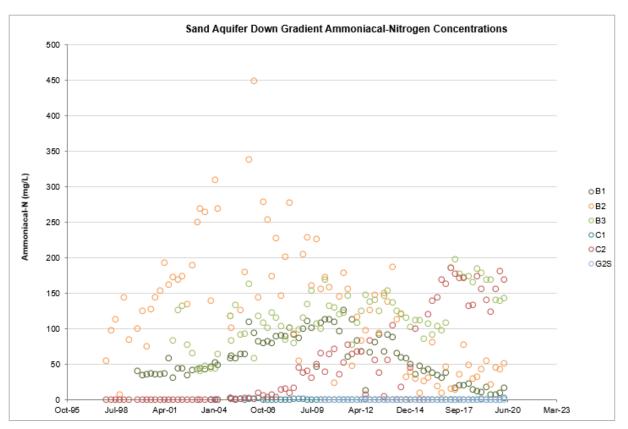


Figure 3-2: Ammoniacal Nitrogen Concentrations in Shallow Bores Screened in the Leachate Plume

Other key leachate indicators, boron, conductivity and chloride are also all elevated in concentrations within the bores that are located and screened in the leachate plume, as would be expected.

During the April 2020 comprehensive monitoring round, water samples taken from all monitoring sites were analysed for typical SVOCs (72 compounds) and VOCs (65 compounds), as per the discharge consent 6010. All compounds detected were at concentrations below the DWSNZ MAV and so the results comply with the resource consent conditions.

The leachate plume appears to have a confined radius northward and is not extending to the north-west or the north-east. The leachate plume width was estimated to be 300-500m in 2014.

3.4 Deep Aquifer Groundwater Quality

The concentration of manganese exceeded the DWSNZ MAV at C2DD within the deep gravel aquifer, in the April 2020 monitoring round. However, it is noted that the manganese concentration at C2DD (0.583mg/L) was consistent with historical results and is representative of background groundwater quality in the area.

3.5 Leachate Effluent

Monitoring results from the leachate effluent samples are not required to meet either the ANZECC LDW trigger values or DWSNZ standards. Apart from the ammoniacal-N concentration which was marginally above the typical range for leachate composition, results from the April 2020 monitoring round were all within the typical composition ranges for Class 1 landfills published in the WasteMINZ³.

³ Technical Guidelines for Disposal to Land, WasteMINZ, 2018

3.6 Tatana Property Drain

Under the revised resource consent conditions approved in December 2019, monitoring location 'SW1' is now re-designated 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.

During this April 2020 monitoring period, there was one exceedance of the resource consent conditions in samples from the Tatana Drain property at TD1 where the ammoniacal-N concentration exceeded the ANZECC AE 95% value.

3.7 Hokio Stream

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

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

During this April 2020 monitoring period, there were two exceedances of the resource consent conditions in samples from the Hokio Stream where the dissolved copper concentration marginally exceeded the ANZECC AE 95% trigger values at each of HS2 and HS3.

3.8 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 DWSNZ. 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.

<u>Shallow aquifer</u>

There was **one exceedance** of the resource consent conditions during the April 2020 sampling round for samples obtained from the shallow aquifer:

• E. coli count in D6 exceeded the ANZECC LDW.

Deeper gravel aquifer

There was **one exceedance** of the resource consent conditions in samples from the deep gravel aquifer during the April 2020 sampling round:

• Manganese concentration in bore C2DD exceeded the DWSNZ MAV.

Irrigation area

There was **one exceedance** of the resource consent conditions during the April 2020 sampling round for samples obtained from the irrigation area:

Boron concentration in F1 exceeded the ANZECC LDW

Tatana Property drain

There was **one exceedance** of the resource consent conditions during the April 2020 sampling round for samples obtained from the Hokio Stream sampling location at TD1:

• Ammoniacal-N exceeded the ANZECC AE 95% trigger value

Hokio stream

There were **two exceedances** of the resource consent conditions during the April 2020 sampling round for samples obtained from the Hokio Stream:

• Dissolved copper concentrations in HS2 and HS3 exceeded the ANZECC AE 95% trigger value.

4. Conclusions

Monitoring results obtained in the April 2020 sampling round suggest that the groundwater at the background monitoring sites is being impacted by local ground conditions and/or activities up-gradient of the landfill.

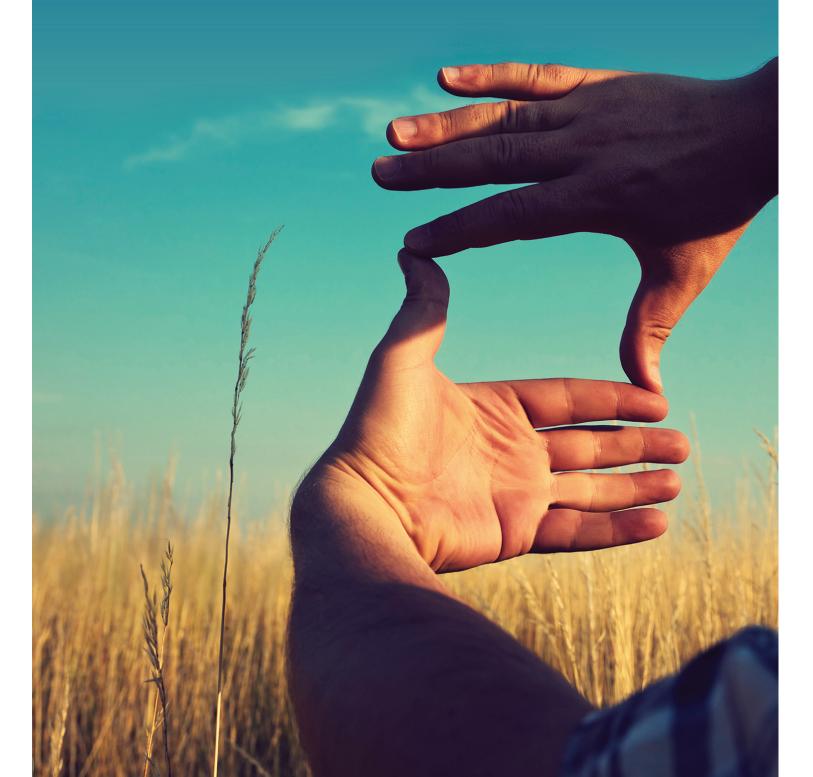
During the April 2020 monitoring period there were six exceedances of the resource consent conditions, as summarised in the following paragraphs.

The deep-water bore C2DD located immediately down-gradient hydraulically of the old unlined landfill showed a manganese concentration above the DWSNZ MAV. The concentration of manganese at this bore is consistent with historical results and is representative of typical ground water quality in the area.

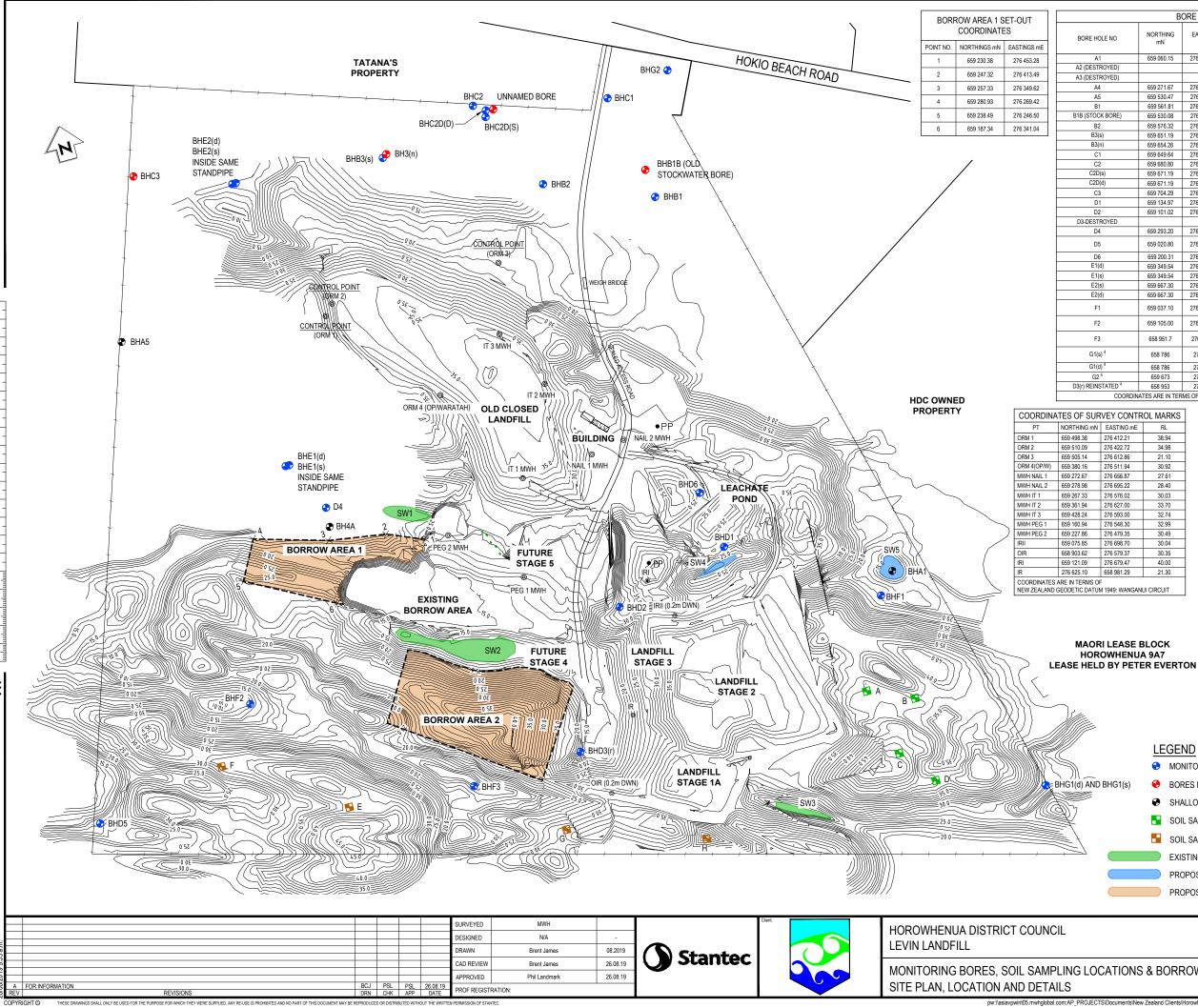
There were two exceedances of consent limits found in samples from surface water monitoring at the Hokio Stream; these were for dissolved copper concentrations at mid-stream (HS2) and downstream (HS3) of the old landfill, with these all showing values marginally above the ANZECC AE 95% trigger values. Additionally, there was one exceedance of consent limits in samples from surface water monitoring at the Tatana Property drain (TD1) where the ammoniacal-N concentration exceeded the ANZECC AE 95% trigger values.

Two exceedances of consent limits were significant: these were the E. coli count at shallow bore D6 and the dissolved boron concentration at irrigation area F1. These exceedances appear to be anomalous when compared to historical data and closer scrutiny of results for samples from this shallow bore is recommended during the next monitoring round.

Appendices







	B	ORE LOCAT	IONS AN		MI S	
HOLE NO	NORTHING	EASTING	R.L. (m)	DEPTH OF WELL (m)	PIEZOMETE R DIAMETER (mm)	FUNCTION
A1	659 060.15	276 944.89	12.95			SHALLOW AQUIFER
STROYED)						SHALLOW AQUIFER
STROYED)						SHALLOW AQUIFER
A4	659 271.67	276 354.72	10.10			SHALLOW AQUIFER
A5	659 530.47	276 185.91	9.62			SHALLOW AQUIFER
B1	659 561.81	276 797.35	9.04	4.3	40	SHALLOW AQUIFER
OCK BORE)	659 530.08	276 799.91	9.28	10		
B2	659 576.32	276 683.50	9.42	3.5	50	SHALLOW AQUIFER
B3(s)	659 651.19	276 519.52	7.76	2.83	50	SHALLOW AQUIFER
B3(n)	659 654.26	276 524.38	7.49	2.33	32	DEEP AQUIFER
C1	659 649.64	276 777.83	7.47	3.60	50	SHALLOW AQUIFER
C2	659 680.80	276 631.22	7.50	2.81	32	SHALLOW AQUIFER
2D(s)	659 671.19	276 641.63	10.13	12.88	32	SHALLOW AQUIFER
2D(d)	659 671.19	276 641.63	10.11	18.85	32	DEEP AQUIFER
C3	659 704.29	276.246.89	7.22	2.8	32	SHALLOW AQUIFER
D1	659 134.97	276 771.65	27.46	23.69	50	EARLY DETECTION
D2	659 101.02	276 642.06	32.12	29.46	50	EARLY DETECTION
STROYED						
D4	659 293.20	276 356.60	20.50	17.0		SHALLOW AQUIFER
D5	659 020.80	276 022.40	17.8	18		SHALLOW AQUIFER BACKGROUND
D6	659 200.31	276 761.08	26.41	16.07	50	EARLY DETECTION
E1(d)	659 349.54	276 329.48	20.91	37.80	32	SHALLOW AQUIFER
E1(s)	659 349.54	276 329.48	20.91	20.05	32	DEEP AQUIFER
E2(s)	659 667.30	276 354.69	13.15	15.24	32	SHALLOW AQUIFER
E2(d)	659 667.30	276 354.69	13.15	28.66	32	DEEP AQUIFER
F1	659 037.10	276 925.50	18.90	15.0	50	SHALLOW AQUIFER LEACHATE IRRIGATION
F2	659 105.00	276 218.00	13.50	10.2	50	SHALLOW AQUIFER LEACHATE IRRIGATION
F3	658 951.7	276 434.0	16.70	10.5	50	SHALLOW AQUIFER LEACHATE IRRIGATION
61(s) ⁴	658 786	277 046	24	15	50	SHALLOW AQUIFER BACKGROUND
61(d) ⁴	658 786	277 046	24	31.5	50	DEEP AQUIFER BACKGROUND
G2 ⁴	659 673	276 835	8	4	50	SHALLOW AQUIFER
EINSTATED 4	658 953	276 552	18	10	50	EARLY DETECTION

SOIL

MONITORING

PEG A

PEG B

PEG C

PEG D

PEG E

PEG F

PEG G

PEG H

JR	VEY CONTR	OL MARKS
ηN	EASTING mE	RL
	276 412.21	38.94
	276 422.72	34.98
	276 612.86	21.10
	276 511.94	30.92
	276 656.87	27.61
	276 695.22	28.40
	276 576.02	30.03
	276 627.00	33.70
	276 593.00	32.74
	276 548.30	32.99
	276 479.35	30.49
	276 698.70	30.04
	276 579.37	30.35
	276 679.47	40.00
	658 981.29	21.30
G OF		

NO	TES:

LEVELS ARE TOP OF STANDPIPE. WHERE THERE IS NO STANDPIPE, LEVELS ARE TOP OF PVC PIPE.

CO-ORDINATES

NORTHING mN EASTING mE

276 882.30

276 932.10

276 899.00

276 930.40

276 294.00

276 169.10

276 520.20

276 667.60

658 938.80

658 917.00

658 862.70

658 822.90

658 965.50

659 046.20

658 878.00

658 827.40

LEVEL (m)

39.2

39.5

46.1

40.4

36.6

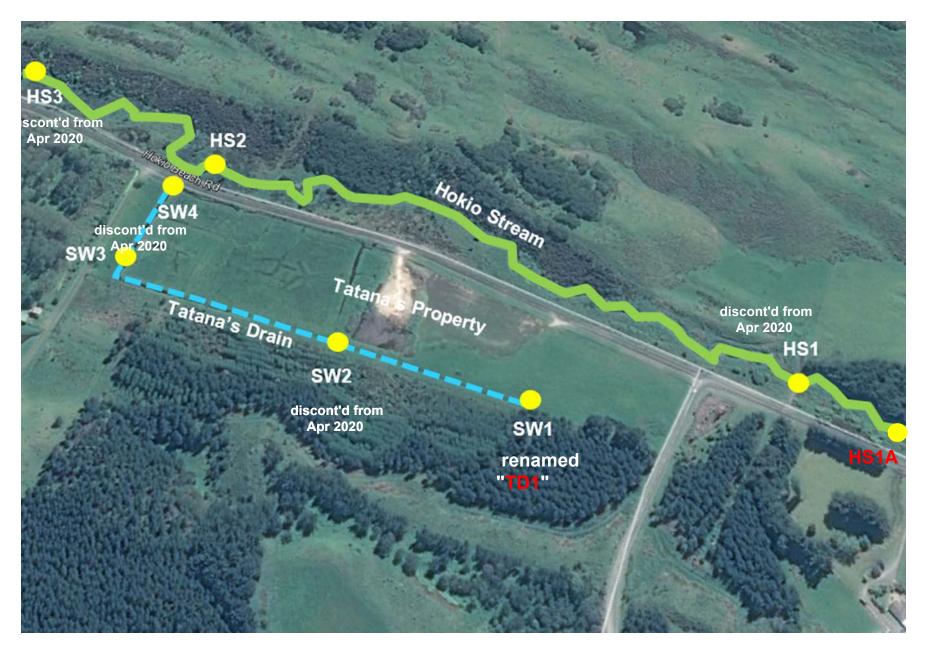
32.9

32.6

23.5

- 2. BHA2, BHA3 AND BHD3 HAVE BEEN LOST DUE TO SITE WORKS.
- 3. "A" SERIES BORE HOLES ARE AUGER HOLES ONLY AND MAY NOT BE ABLE TO BE LOCATED.
- 4. BORES INSTALLED IN AUG 2009. DETAILS ARE APPROXIMATE.
- 5. CONTOUR INTERVALS: 5m MAJOR, 1m MINOR

	LE	GEND						
	•	MONITOR BORES CURRENTLY SAMPLED (FROM JAN 2010)						
ND BHG1(s)	•	BORES NOT SAMPLE	C					
	۲	SHALLOW HANDAUG	ER STANDPIPE	S NOT ABLE TO BE LOCAT	ED			
		SOIL SAMPLING LOCA	ATION PEG - M	ONITORED				
		SOIL SAMPLING LOCA	ATION PEG - N	OT MONITORED				
		EXISTING STORMWA	TER SOAKAGE	AREA				
		PROPOSED STORMW	VATER SOAKAGE AREA					
		PROPOSED BORROW	AREAS					
				FOR CONSTRUC	TION			
			Status Stamp FOR		ONLY			
			Date Stamp	26.08.19				
OCATIONS	S & B	ORROW AREAS) 1:4000 (A3)					
			Drawing No. 310101	088-19-001-G001	Rev.			
JECTS\Documents\Net	w Zealand	Clients\Horowhenua District Counc	il\80500724 - Levin La	andfill Volumes\2019\General\310101088	3-19-001-G001			



Hokio Stream ("HS") and Tatana's Property Drain ("SW") Monitoring Locations

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).

			Та	able A (Co	ondition	3, DP 601	LO)									Та	able B (Co	ondition 3	3, DP 601	.0)										Table C (0	Condition	3, DP 601	0)
Reports Due	ts Due		Deep Aquifer Bores					Shallow Aquifer Bores								Irrigation Bores			Hokio Stream ⁽⁴⁾ Tatana Drain			Leachale											
Annual (Quarterly	Month	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 F	IS1A F	S2 HS	53 TD1	Pond ⁽⁵⁾
	May-20	Apr-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	2	2	2 2	V C	A S
Sep-20	Aug-20	Jul-20	Ι	I + SW	I	1	С	1	1	1	I + SW	1	1	1	I + SW	I + SW	1	I + SW	I + SW	1	I + SW	1	С	С	1	I	-	I + SW	or	or	o jo	5 1	or
	Nov-20	Oct-20	-	I + SW	I	I	С	1	I	I	I + SW	1	I	I	I + SW	I + SW	1	I + SW	I + SW	I	I + SW	I	С	С	I	I	I	I + SW	<pre></pre>	<pre></pre>	ve ve	C	A ve f
	Feb-21	Jan-21	-	I + SW	I	I	С	1	I	1	I + SW	1	1	I	I + SW	I + SW	1	I + SW	I + SW	1	I + SW	1	С	С	1	I	I	I + SW	nthly nsiv ars nthly		nsı ars nthl		nsi
	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	Aor Aor Aor	rehei Yea Mon	ehe Ve: Aor		Aor ehe
Sep-21	Aug-21	Jul-21	-	I + SW	I	I	С	I	I	I	I + SW	1	I	I	I + SW	I + SW	1	I + SW	I + SW	I	I + SW	I	С	С	I	I	I	I + SW					N N
	Nov-21	Oct-21	-	I + SW	I	I	С	1	I	1	I + SW	I	1	- I	I + SW	I + SW	1	I + SW	I + SW	- I	I + SW	1	С	С	I	I		I + SW	μο	μο		C	
	Feb-22	Jan-22	L	I + SW	I	I	С	I	I	1	I + SW	I	1	I	I + SW	I + SW	1	I + SW	I + SW	1	I + SW	I	С	С	I	I	- I	I + SW	U	0			U
	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	ue	С	c c	C C	C + A
Sep-22	Aug-22	Jul-22	I	I + SW	I	I	1	I	1	1	I + SW	1	I	I	I + SW	I + SW	1	I + SW	I + SW	I	I + SW	1	1	I	I	I	I	I + SW	ntin er 2 ars	1		I I	1
	Nov-22	Oct-22	I	I + SW	I	I	I	I	I	1	I + SW	I	I	I	I + SW	I + SW	1	I + SW	I + SW	I	I + SW	I	I	I	I	I	I	I + SW	afte	С	C (C C	С
	Feb-23	Jan-23	I	I + SW			1	1	1	1	I + SW			I	I + SW	I + SW		I + SW	I + SW		I + SW			1		I		I + SW	Dis	1		I	

Notes:

- Bores to be developed by Consent Holder (1)
- (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
- Comprehensive list (see below) С
- Indicator list (see below)
- Pesticide and SVOC analysis Α
- 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.

¹⁾ 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 locations (HS1A, HS2 and HS3) shall return to the base case intensive monitoring until conditions J and K are again being fulfilled.

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)

	рН
Characterising	electrical conductivity (EC)
Characterising parameters	alkalinity
parameters	total hardness
	suspended solids
Oxygen demand	COD and scBOD ₅
Nutrients*	NO3-N, NH4-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

-			000
parar	neters		elect
Chara	octerisin	g	рН

characterising	рп
parameters	electi
Oxygen demand	COD
Nutrients*	NO3-
Metals*	AL, N
Other elements	B and
Biological [⁺]	E. col
* Analyses performed	for n

⁺ E. coli added from April 2019 sampling onwards

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

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

trical conductivity (EC) and scBOD₅ -N and NH4-N Vn. Ni. Pb and Hg d Cl

nutrients and metals are for dissolved rather than total concentrations

Appendix C Analytical Results

🔅 eurofins

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

ELS

Eurofins ELS Limited

Analytical Report

Report Number: 20/17363 Issue: 1 29 April 2020

Sample 20/17363 Notes: 17	Site -01 Levin C2dd /9221-0 Levin Landfill Sample		Map Ref.	Date Sampled 06/04/2020 00:00		eceived Order No. 020 15:54 0
	Test	Result	Units		Test Date	Signatory
0001	рН	7.7			06/04/2020	Marylou Cabral KTP
0002	Suspended Solids - Total	< 6	g/m³		06/04/2020	Marylou Cabral KTP
0040	Total (NP) Organic Carbon	4.2	g/m³		09/04/2020	Sharon van Soest KTP
0052	Alkalinity - Total	194	g CaCO3/m³		06/04/2020	Marylou Cabral KTP
0055	Conductivity at 25°C	52.5	mS/m		06/04/2020	Marylou Cabral KTP
0081	Chemical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous	< 1	g/m³		06/04/2020	Gordon McArthur KTP
0602	Chloride	40.5	g/m³		07/04/2020	Shanel Kumar KTP
0605	Nitrate - Nitrogen	< 0.01	g/m³		07/04/2020	Shanel Kumar KTP
0607	Sulphate	0.03	g/m³		07/04/2020	Shanel Kumar KTP
0760	Ammonia Nitrogen	0.33	g/m³		11/04/2020	Athena Cao
1642	Total Hardness	168	g CaCO3/m³		07/04/2020	Shanel Kumar KTP
1810	Calcium - Dissolved	43.8	g/m³		07/04/2020	Shanel Kumar KTP
1819	Iron - Dissolved	0.024	g/m³		07/04/2020	Shanel Kumar KTP
1822	Magnesium - Dissolved	14.3	g/m³		07/04/2020	Shanel Kumar KTP
1834	Sodium - Dissolved	39.4	g/m³		07/04/2020	Shanel Kumar KTP
2088	Dissolved Reactive Phosphorus	s0.667	g/m³		11/04/2020	Athena Cao
6701	Aluminium - Dissolved	< 0.002	g/m³		07/04/2020	Shanel Kumar KTP
6703	Arsenic - Dissolved	0.003	g/m³		07/04/2020	Shanel Kumar KTP
6707	Boron - Dissolved	0.07	g/m³		07/04/2020	Shanel Kumar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		07/04/2020	Shanel Kumar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		07/04/2020	Shanel Kumar KTP
6713	Copper - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6721	Manganese - Dissolved	0.583	g/m³		07/04/2020	Shanel Kumar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6726	Potassium - Dissolved	6.32	g/m³		07/04/2020	Shanel Kumar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		07/04/2020	Shanel Kumar KTP
M0104	E. coli	< 4	cfu/100mL		06/04/2020	Yuemei Yu KTP
MO-5001	Volatile Fatty Acids	< 5	g/m³			Prashilla Singh Transcribed
					I	by
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Singh Transcribed
						by
	Sample Filtration	Completed			07/04/2020	Freddie Badraun .
	12,3-Diuron	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-002		<0.0001	mg/L		08/04/2020	Joanna Yang KTP
	3 a-chlordane	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-004	4 Aldrin	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-005		<0.0001	mg/L		08/04/2020	Joanna Yang KTP
	6 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-007		< 0.0001	mg/L		08/04/2020	Joanna Yang KTP
	3 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yang KTP
	9 Endosulfan Sulfate	< 0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-010) Endrin	<0.0001	mg/L		08/04/2020	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 1 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-01 Notes: 179221-0 Levin	Site Levin C2dd		Map Ref.	Date Sampled 06/04/2020 00:00		Received 2020 15:54	Order No. 0
Test		Result	Units		Test Date	Signatory	
SVOC-011 Endrin Aldel	nvde	<0.001	mg/L		08/04/2020	Joanna Yan	n KTP
SVOC-012 Endrin Ketor	-	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-013 Gamma-Chl		< 0.001	mg/L		08/04/2020	Joanna Yan	5
SVOC-014 Heptachlor	ordano	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-015 Heptachlor I	Fnoxide	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-016 Hexachlorot	•	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-017 Lindane (g-		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-018 Methoxychic		< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-019 p,p'-DDD		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-020 p,p'DDE		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-021 p,p'-DDT		< 0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-022 Procymidon	۵	<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-022 Propanil		<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-024 Endosulfan	1	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-025 Alachlor	1	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-027 Atrazine		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-028 Bromacil		<0.005	mg/L		08/04/2020	Joanna Yan	-
SVOC-029 Carbofuran		<0.000	mg/L		08/04/2020	Joanna Yan	-
SVOC-030 Cyanazine		< 0.005	mg/L		08/04/2020	Joanna Yan	-
SVOC-031 d-BHC		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-032 Metalaxyl-M		<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-033 Metolachlor		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-034 Metribuzin		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-035 Molinate		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-037 Oxadiazon		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-038 Pendimetha	lin	<0.002	mg/L		08/04/2020	Joanna Yan	-
SVOC-039 Propazine		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-040 Pyriproxyfer	1	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-041 Simazine	•	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-042 Terbuthylazi	ne	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-042 Terbuaryaz		<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-044 Hexazinone		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-045 Chlorpyrifos		<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-046 Diazinon		<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-047 Dimethoate		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-048 Pirimiphos n	nethyl	<0.001	mg/L		08/04/2020	Joanna Yan	
SVOC-049 Acenapthen	-	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-050 Acenaphthy		< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-050 Acenaphiny SVOC-051 Anthracene	lene	< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-052 benz(a)anth	racene	< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-053 Benzo(a)pyr		< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-054 Total Benzo fluoranthren	(b) and Benzo(k)	< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-055 Benzo(g,h,i)		<0.001	ma/l		08/04/2020	Joanna Yan	
	perylene	< 0.001	mg/L		08/04/2020		-
SVOC-057 Chrysene SVOC-058 Dibenz(a,h)a	anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yan Joanna Yan	-
SVOC-058 Diberiz(a,r)		< 0.0001	mg/L		08/04/2020		-
SVOC-059 Fluoranthen SVOC-060 Fluorene	6		mg/L		08/04/2020	Joanna Yang	
	B-cd)pyropo	< 0.0001 <0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-061 Indeno(1,2,3			mg/L			Joanna Yan	-
SVOC-062 Naphthalene		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-063 Phenanthree	IC	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-064 Pyrene		<0.0001	mg/L		08/04/2020	Joanna Yan	дкір



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

SampleSite20/17363-01Levin C2ddNature 170021Levin 170021		Map Ref.	Date Sampled 06/04/2020 00:00		Received 2020 15:54	Order No. 0
Notes: 179221-0 Levin Landfill Sample	- "				.	
Test	Result	Units		Test Date	Signatory	
SVOC-0662,2',3,4,4',5'-Hexachlorobiphe	•	mg/L		08/04/2020	Joanna Yang	
SVOC-067 2,2',4,5,5'-Pentachlorobiphen	-	mg/L		08/04/2020	Joanna Yang	
SVOC-0682,4,4'-Trichlorobiphenyl	< 0.0001	mg/L		08/04/2020 08/04/2020	Joanna Yang	
SVOC-0692,4-Dichlorobiphenyl	<0.0001	mg/L			Joanna Yang	
SVOC-070 2,2',3,4,4',5',6-Heptachlorobi SVOC-072 Bis(2-ethylhexyl)adipate	0.0001	mg/L		08/04/2020 08/04/2020	Joanna Yang	-
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yang Joanna Yang	-
VOC-001 1,2,4- minethylbenzene	<0.0005	mg/L mg/L		08/04/2020	Joanna Yang	-
VOC-002 1,3,5-miniethylbenzene VOC-003 Benzene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-005 Isopropylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-007 Naphthalene	<0.0005	mg/L		08/04/2020	Joanna Yang	
	<0.0005			08/04/2020	Joanna Yang	-
VOC-008 n-Butylbenezene	<0.0005	mg/L		08/04/2020		-
VOC-009 n-Propylbenzene VOC-010 o-Xylene	<0.0005	mg/L mg/L		08/04/2020	Joanna Yang Joanna Yang	-
VOC-010 0-Xylene VOC-011 p-Isopropyltoluene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-011 p-isopropynoluene VOC-013 sec-Butylbenzene	<0.0005			08/04/2020	Joanna Yang	
VOC-013 Sec-Datylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-014 Stylene VOC-015 tert-Butylbenzene		mg/L		08/04/2020		-
VOC-016 Toluene	<0.0005 <0.0005	mg/L mg/L		08/04/2020	Joanna Yang Joanna Yang	
				08/04/2020		
VOC-017 Total p,m Xylene, Ethylbenze VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yang	
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yang Joanna Yang	-
	<0.0005	mg/L		08/04/2020		-
VOC-020 1,1,2,2-Tetrachloroethane		mg/L		08/04/2020	Joanna Yang	-
VOC-021 1,1,2-Trichloroethane VOC-022 1,1-Dichloroethane	<0.0005 <0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-022 1,1-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
		mg/L		08/04/2020	Joanna Yang	-
VOC-024 1,1-Dichloropropene	<0.0005 <0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-025 1,2,3-Trichloropropane		mg/L		08/04/2020	Joanna Yang	-
VOC-026 1,2-Dibromo-3-chloropropane VOC-027 1,2-Dibromoethane	e <0.001 <0.0002	mg/L		08/04/2020	Joanna Yang	-
,		mg/L			Joanna Yang	-
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-029 1,2-Dichloropropane	<0.0005 <0.0005	mg/L		08/04/2020 08/04/2020	Joanna Yang Joanna Yang	-
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		08/04/2020		-
VOC-031 2,2-Dichloropropane		mg/L		08/04/2020	Joanna Yang	
VOC-032 Allyl chloride VOC-033 Bromochloromethane	<0.0005 <0.0012	mg/L		08/04/2020	Joanna Yang	-
VOC-033 Bromochloromethane	<0.0012	mg/L		08/04/2020	Joanna Yang Joanna Yang	-
		mg/L				
VOC-035 Carbon tetrachloride	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-036 Chloroethane VOC-037 Chloromethane	<0.001	mg/L		08/04/2020	Joanna Yang	-
	< 0.006	mg/L		08/04/2020	Joanna Yang	-
VOC-038 cis-1,2-Dichloroethene	< 0.0005	mg/L		08/04/2020	Joanna Yang	
VOC-039 cis-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-040 Dibromomethane	< 0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		08/04/2020	Joanna Yang	-
VOC-042 Dichloromethane	<0.005	mg/L		08/04/2020	Joanna Yang	-
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		08/04/2020	Joanna Yang	-
VOC-044 Tetrachloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yang	
VOC-047 Trichloroethene	< 0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-048 Trichlorofluoromethane	< 0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-049 Vinyl Chloride	<0.0005	mg/L		08/04/2020	Joanna Yang	JKIP

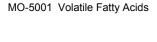


Wellington 85 Port Road, Seaview Lower Hutt 5045 Phone: (04) 576-5016

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

Page 3 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363	-01 Levin C2dd		Map Ref.	Date Sampled 06/04/2020 00:00		Received Order No. 2020 15:54 0
	9221-0 Levin Landfill Sample			00/04/2020 00.00	00/04/2	2020 15.54 0
	Test	Result	Units		Test Date	Signatory
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	1,2,4-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	1,2-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	1,3-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	1,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	2-Chlorotoluene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
VOC-057	Bromobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
VOC-058	Chlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	4-Methyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Carbon disulphide	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Bromoform	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Chloroform	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
Sample	Site		Map Ref.	Date Sampled		eceived Order No.
20/17363 Notes: 17	-02 Levin E1d 9222-0 Levin Landfill Sample			06/04/2020 00:00	07/04/2	2020 09:30 0
110165.17	•	Decult	Unite		Test Date	Signatory
0001	Test	Result	Units		Test Date	Signatory
0001	pH Suggested Solids Total	7.7	er / en 3		07/04/2020	Marylou Cabral KTP
0002	Suspended Solids - Total	< 5	g/m³		07/04/2020	Marylou Cabral KTP
0040	Total (NP) Organic Carbon	3.1	g/m³		09/04/2020	Sharon van Soest KTP
0052	Alkalinity - Total	155	g CaCO3/m³		07/04/2020	Marylou Cabral KTP
0055	Conductivity at 25°C	45.5	mS/m		07/04/2020	Marylou Cabral KTP
0081	Chemical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous		g/m³		09/04/2020	Marylou Cabral KTP
0602	Chloride	38.7	g/m³		07/04/2020	Shanel Kumar KTP
0605	Nitrate - Nitrogen	< 0.01	g/m³		07/04/2020	Shanel Kumar KTP
0607	Sulphate	< 0.02	g/m³		09/04/2020	Amit Kumar KTP
0760	Ammonia Nitrogen	0.20	g/m³		11/04/2020	Athena Cao
1642	Total Hardness	131	g CaCO3/m³		07/04/2020	Shanel Kumar KTP
1810	Calcium - Dissolved	31.8	g/m³		07/04/2020	Shanel Kumar KTP
1819	Iron - Dissolved	0.030	g/m³		07/04/2020	Shanel Kumar KTP
1822	Magnesium - Dissolved	12.4	g/m³		07/04/2020	Shanel Kumar KTP
1834	Sodium - Dissolved	36.5	g/m³		07/04/2020	Shanel Kumar KTP
2088	Dissolved Reactive Phosphoru		g/m³		11/04/2020	Athena Cao
6701	Aluminium - Dissolved	< 0.002	g/m³		07/04/2020	Shanel Kumar KTP
6703	Arsenic - Dissolved	0.007	g/m³		07/04/2020	Shanel Kumar KTP
6707	Boron - Dissolved	0.06	g/m³		07/04/2020	Shanel Kumar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		07/04/2020	Shanel Kumar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		07/04/2020	Shanel Kumar KTP
6713	Copper - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6721	Manganese - Dissolved	0.248	g/m³		07/04/2020	Shanel Kumar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kumar KTP
6726	Potassium - Dissolved	5.03	g/m³		07/04/2020	Shanel Kumar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		07/04/2020	Shanel Kumar KTP
	E. coli	< 4	cfu/100mL		07/04/2020	Yuemei Yu KTP
MO-5001	Volatile Fatty Acids	< 5	g/m³			Prashilla Singh Transcribed



ilac-MRA

ACCREDITED LABORATORY

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

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

SampleSite20/17363-02Levin E1dNotes: 179222-0 Levin Landfill Sample	I	Map Ref.	Date Sampled 06/04/2020 00:00	Date Received 07/04/2020 09:3		Order No. 0
Test	Result	Units		Test Date	Signatory	
MO-5002 Total Halogenated Phenolics	< 0.05	g/m³		Test Date		gh Transcribed
	< 0.05	g/m			by	gii manscribeu
P1859 Sample Filtration	Completed			07/04/2020	Freddie Badr	aun
SVOC-001 2,3-Diuron	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-002 a-BHC	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-003 a-chlordane	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-004 Aldrin	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-005 b-BHC	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-006 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-007 Dieldrin	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-008 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yang	
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-010 Endrin	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-011 Endrin Aldehyde	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-012 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-013 Gamma-Chlordane	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-014 Heptachlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-018 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-019 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-020 p,p'DDE	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-021 p,p'-DDT	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-022 Procymidone	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-023 Propanil	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-024 Endosulfan I	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-025 Alachlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-027 Atrazine	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-028 Bromacil	<0.005	mg/L		08/04/2020	Joanna Yang	
SVOC-029 Carbofuran	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-030 Cyanazine	<0.005	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-031 d-BHC	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-033 Metolachlor	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-034 Metribuzin	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-035 Molinate	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-038 Pendimethalin	<0.002	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-039 Propazine	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-041 Simazine	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-042 Terbuthylazine	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-043 Trifluralin	<0.0001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-044 Hexazinone	<0.001	mg/L		08/04/2020	Joanna Yang	KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-046 Diazinon	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-047 Dimethoate	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-049 Acenapthene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-050 Acenaphthylene	< 0.0010	mg/L		08/04/2020	Joanna Yang	
SVOC-051 Anthracene	< 0.0010	mg/L		08/04/2020	Joanna Yang	
					J	



SampleSite20/17363-02Levin E1dNotes: 179222-0 Levin Landfill Sample		Map Ref.	Date Sampled 06/04/2020 00:00		Date Received 07/04/2020 09:30	
Test	Result	Units		Test Date	Signatory	
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-054 Total Benzo(b) and Benzo(k)	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
fluoranthrene	< 0.0010	ilig/L		00/04/2020		y KTI
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		08/04/2020	Joanna Yan	n KTP
SVOC-057 Chrysene	< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-059 Fluoranthene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-060 Fluorene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-061 Indeno(1,2,3-cd)pyrene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-062 Naphthalene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-063 Phenanthrene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-064 Pyrene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphe		mg/L		08/04/2020	Joanna Yan	-
SVOC-067 2,2',4,5,5'-Pentachlorobiphen	•	mg/L		08/04/2020	Joanna Yan	-
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-070 2,2',3,4,4',5',6-Heptachlorobip		mg/L		08/04/2020	Joanna Yan	-
SVOC-072 Bis(2-ethylhexyl)adipate	0.0002	mg/L		08/04/2020	Joanna Yan	-
VOC-001 1,2,4-Trimethylbenzene	< 0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-003 Benzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-005 Isopropylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-007 Naphthalene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-008 n-Butylbenezene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-009 n-Propylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-010 o-Xylene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		08/04/2020	Joanna Yan	
VOC-013 sec-Butylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	5
VOC-014 Styrene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-015 tert-Butylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	
VOC-016 Toluene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-017 Total p,m Xylene, Ethylbenze		mg/L		08/04/2020	Joanna Yan	-
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-026 1,2-Dibromo-3-chloropropane		mg/L		08/04/2020	Joanna Yan	-
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		08/04/2020	Joanna Yan	-
VOC-028 1,2-Dichloroethane	<0.0002	mg/L		08/04/2020	Joanna Yan	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-032 Any childred	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-033 Bromochloromethane	<0.0012	mg/L		08/04/2020	Joanna Yan	-
	<0.001	•		08/04/2020	Joanna Yan	-
VOC-035 Carbon tetrachloride		mg/L				
VOC-036 Chloroethane	<0.001	mg/L		08/04/2020	Joanna Yan	YNIP



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 6 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-0 Notes: 1793	Site 2 Levin E1d 222-0 Levin Landfill Sample		Map Ref.	Date Sampled 06/04/2020 00:00		Received Order No. 2020 09:30 0
	Test	Result	Units		Test Date	Signatory
	Chloromethane	<0.006	mg/L		08/04/2020	Joanna Yang KTP
	cis-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	cis-1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Dibromomethane	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Dichlorodifluoromethane	<0.001	mg/L		08/04/2020	Joanna Yang KTP
	Dichloromethane	<0.005	mg/L		08/04/2020	Joanna Yang KTP
	lexachlorobutadiene	<0.0002	mg/L		08/04/2020	Joanna Yang KTP
	Fetrachloroethene	<0.0002	mg/L		08/04/2020	Joanna Yang KTP
	rans-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	rans-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Trichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Frichlorofluoromethane	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	/inyl Chloride	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	.2.4-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	,2-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	,3-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	2-Chlorotoluene	<0.0005	•		08/04/2020	Joanna Yang KTP
	I-Chlorotoluene	<0.0005	mg/L		08/04/2020	-
			mg/L			Joanna Yang KTP
	Bromobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang KTP
		<0.0005	mg/L		08/04/2020	Joanna Yang KTP
	,3,5-Trichlorobenzene	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	I-Methyl-2-Pentanone	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Carbon disulphide	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
	Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
VOC-063 E		< 0.0005	mg/L		08/04/2020	Joanna Yang KTP
VOC-064 C VOC-065 E	Dibromochloromethane	< 0.0005 < 0.0005	mg/L mg/L		08/04/2020 08/04/2020	Joanna Yang KTP Joanna Yang KTP
Sample	Site		Map Ref.	Date Sampled	Data B	Received Order No.
20/17363-0				06/04/2020 00:00		2020 09:30 0
	Test	Result	Units		Test Date	Signatory
	bH	7.7	Onits		07/04/2020	Marylou Cabral KTP
•		14	a/m ³		07/04/2020	-
	Suspended Solids - Total		g/m³			Marylou Cabral KTP
	Total (NP) Organic Carbon	2.1 76	g/m³		09/04/2020	Sharon van Soest KTP
	Alkalinity - Total		g CaCO3/m³		07/04/2020	Marylou Cabral KTP
	Conductivity at 25°C	35.4	mS/m		07/04/2020	Marylou Cabral KTP
	Chemical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McArthur KTP
	30D5 - Soluble Carbonaceous		g/m³		09/04/2020	Marylou Cabral KTP
	Chloride	47.8	g/m³		07/04/2020	Shanel Kumar KTP
	Nitrate - Nitrogen	< 0.01	g/m³		07/04/2020	Shanel Kumar KTP
	Sulphate	12.4	g/m³		07/04/2020	Shanel Kumar KTP
	Ammonia Nitrogen	0.30	g/m³		11/04/2020	Athena Cao
	Total Hardness	83	g CaCO3/m³		07/04/2020	Shanel Kumar KTP
	Calcium - Dissolved	23.1	g/m³		07/04/2020	Shanel Kumar KTP
	ron - Dissolved	0.046	g/m³		07/04/2020	Shanel Kumar KTP
	Magnesium - Dissolved	6.14	g/m³		07/04/2020	Shanel Kumar KTP
	Sodium - Dissolved	30.2	g/m³		07/04/2020	Shanel Kumar KTP
	Dissolved Reactive Phosphorus		g/m³		11/04/2020	Athena Cao
	Aluminium - Dissolved	< 0.002	g/m³		07/04/2020	Shanel Kumar KTP
6703 A	Arsenic - Dissolved	0.001	g/m³		07/04/2020	Shanel Kumar KTP
		Wellington	Rolleston		Dunedin	Page 7 o



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

Page 7 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363 Notes: 17	Site 3-03 Levin E2d 79223-0 Levin Landfill Sample		Map Ref.	Date Sampled 06/04/2020 00:00		eceived 2020 09:30	Order No. 0
10100.17	Test	Result	Units		Test Date	Signatory	
6707	Boron - Dissolved	< 0.03	g/m ³		07/04/2020	Shanel Kuma	
6708	Cadmium - Dissolved	< 0.0002	U U		07/04/2020	Shanel Kuma	
			g/m³				
6711	Chromium - Dissolved	< 0.001	g/m³		07/04/2020	Shanel Kuma	
6713	Copper - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kuma	
6718	Lead - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kuma	
6721	Manganese - Dissolved	0.234	g/m³		07/04/2020	Shanel Kuma	
6722	Mercury - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kuma	
6724	Nickel - Dissolved	< 0.0005	g/m³		07/04/2020	Shanel Kuma	
6726	Potassium - Dissolved	5.67	g/m³		07/04/2020	Shanel Kuma	
6738	Zinc - Dissolved	< 0.002	g/m³		07/04/2020	Shanel Kuma	
M0104	E. coli	< 4	cfu/100mL		07/04/2020	Yuemei Yu K	
MO-5001	Volatile Fatty Acids	< 5	g/m³				gh Transcribed
						by	
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³				gh Transcribed
D4050	Comple Filtration	Completed			07/04/2020	by Fraddia Dade	
	Sample Filtration	Completed			07/04/2020	Freddie Badr	
	12,3-Diuron	< 0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-002		< 0.0001	mg/L		08/04/2020	Joanna Yang	
	3 a-chlordane	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-004		< 0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-00		< 0.0001	mg/L		08/04/2020	Joanna Yang	
	6 cis-Permethrin	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-007		<0.0001	mg/L		08/04/2020	Joanna Yang	
	8 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yang	
	9 Endosulfan Sulfate	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-01		<0.0001	mg/L		08/04/2020	Joanna Yang	
	1 Endrin Aldehyde	<0.001	mg/L		08/04/2020	Joanna Yang	
	2 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yang	
	3 Gamma-Chlordane	<0.001	mg/L		08/04/2020	Joanna Yang	
	4 Heptachlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
	5 Heptachlor Epoxide	<0.0001	mg/L		08/04/2020	Joanna Yang	
	6 Hexachlorobenzene	<0.0001	mg/L		08/04/2020	Joanna Yang	
	7 Lindane (g-BHC)	<0.0001	mg/L		08/04/2020	Joanna Yang	
	8 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
	9 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-020		<0.0001	mg/L		08/04/2020	Joanna Yang	
	1 p,p'-DDT	< 0.001	mg/L		08/04/2020	Joanna Yang	
	2 Procymidone	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-02	•	<0.001	mg/L		08/04/2020	Joanna Yang	
	4 Endosulfan I	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-02		<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-02		<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-028		<0.005	mg/L		08/04/2020	Joanna Yang	
	9 Carbofuran	<0.001	mg/L		08/04/2020	Joanna Yang	
	0 Cyanazine	<0.005	mg/L		08/04/2020	Joanna Yang	
SVOC-03		<0.0001	mg/L		08/04/2020	Joanna Yang	
	2 Metalaxyl-M	<0.001	mg/L		08/04/2020	Joanna Yang	
	3 Metolachlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
	4 Metribuzin	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-03		<0.0001	mg/L		08/04/2020	Joanna Yang	
	7 Oxadiazon	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-038	8 Pendimethalin	<0.002	mg/L		08/04/2020	Joanna Yang	KTP



Sample 20/17363-03 Notes: 179223-0 Lev	Site Levin E2d		Map Ref.	Date Sampled 06/04/2020 00:00		Received 2020 09:30	Order No. 0
Test		Result	Units		Test Date	Signatory	
SVOC-039 Propazine		<0.0001	mg/L		08/04/2020	Joanna Yan	a KTP
SVOC-040 Pyriproxyf		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-041 Simazine		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-042 Terbuthyla	azine	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-043 Trifluralin		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-044 Hexazinor	ne	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-045 Chlorpyrife		< 0.0001	mg/L		08/04/2020	Joanna Yan	0
SVOC-046 Diazinon		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-047 Dimethoat	te	<0.001	mg/L		08/04/2020	Joanna Yan	•
SVOC-048 Pirimiphos		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-049 Acenapthe	-	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-050 Acenaphth		< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-051 Anthracen	•	< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-052 benz(a)an	thracene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-053 Benzo(a)p		< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-054 Total Benz	zo(b) and Benzo(k)	< 0.0010	mg/L		08/04/2020	Joanna Yan	-
fluoranthre			Ũ				•
SVOC-055 Benzo(g,h	i,i)perylene	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-057 Chrysene		< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-058 Dibenz(a,I	h)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-059 Fluoranthe	ene	< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-060 Fluorene		< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-061 Indeno(1,2	2,3-cd)pyrene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-062 Naphthale	ene	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-063 Phenanthi	rene	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-064 Pyrene		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-066 2,2',3,4,4',	5'-Hexachlorobiphe	nyk0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-067 2,2',4,5,5'-	Pentachlorobiphen	yl <0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-068 2,4,4'-Tric	hlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-0692,4-Dichlo	robiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-070 2,2',3,4,4',	5',6-Heptachlorobip	hen@10001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-072 Bis(2-ethy	lhexyl)adipate	0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-001 1,2,4-Trim	ethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-002 1,3,5-Trim	ethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-003 Benzene		<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-005 Isopropylb	oenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-007 Naphthale	ene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-008 n-Butylber	nezene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-009 n-Propylbe	enzene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-010 o-Xylene		<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-011 p-Isopropy	ltoluene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-013 sec-Butylb	benzene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-014 Styrene		<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-015 tert-Butylb	enzene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-016 Toluene		<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-017 Total p,m		ne<0.0015	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-018 1,1,1,2-Te	trachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-019 1,1,1-Trich	nloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	
VOC-020 1,1,2,2-Te	trachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-021 1,1,2-Trich	nloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-022 1,1-Dichlo	roethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
	roethene	<0.0005	mg/L		08/04/2020	Joanna Yan	



Sample 20/17363-03	Site Levin E2d		Map Ref.	Date Sampled 06/04/2020 00:00		Received 2020 09:30	Order No. 0
Notes: 179223	3-0 Levin Landfill Sample						
Tes		Result	Units		Test Date	Signatory	
	Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yang	
VOC-025 1,2,	3-Trichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-026 1,2-	Dibromo-3-chloropropane	<0.001	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-027 1,2-	Dibromoethane	<0.0002	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-028 1,2-	Dichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-029 1,2-	Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yang	
VOC-030 1,3-	Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-031 2,2-	Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-032 Ally	I chloride	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-033 Broi	mochloromethane	<0.0012	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-034 Broi	momethane	<0.001	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-035 Carl	bon tetrachloride	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-036 Chlo	oroethane	<0.001	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-037 Chlo	oromethane	<0.006	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-038 cis-	1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-039 cis-	1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-040 Dibr	romomethane	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-041 Dich	hlorodifluoromethane	<0.001	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-042 Dich	hloromethane	<0.005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-043 Hex	achlorobutadiene	<0.0002	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-044 Tetr	rachloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-045 tran	s-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-046 tran	s-1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yang	KTP
VOC-047 Tric	hloroethene	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-048 Tric	hlorofluoromethane	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-049 Viny	yl Chloride	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-050 1,2,	3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-051 1,2,	4-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	J KTP
VOC-052 1,2-	Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-053 1,3-	Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-054 1,4-	Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	KTP
VOC-055 2-C	hlorotoluene	<0.0005	mg/L		08/04/2020	Joanna Yang	KTP
VOC-056 4-C	hlorotoluene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-057 Broi	mobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-058 Chlo	orobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	KTP
VOC-059 1,3,	5-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yang	KTP
VOC-060 4-M	lethyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-061 Carl	bon disulphide	<0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-062 Broi	modichloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-063 Broi	moform	< 0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-064 Chlo	oroform	< 0.0005	mg/L		08/04/2020	Joanna Yang	I KTP
VOC-065 Dibr	romochloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yang	KTP
Sample 20/17363-04 Notes: 179224	Site Levin G1D 4-0 Levin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order No. 0
Tes		Result	Units		Test Date	Signatory	
0001 pH		7.7			02/04/2020	Gordon McA	rthur KTP
•	pended Solids - Total	< 5	g/m³		02/04/2020	Gordon McA	
	al (NP) Organic Carbon	2.0	g/m³		04/04/2020	Amit Kumar I	
	alinity - Total	59	g CaCO3/m³		02/04/2020	Gordon McA	
	nductivity at 25°C	28.3	mS/m		02/04/2020	Gordon McA	
0055 C01	iduolivity at 20 C	20.0	110/111		02/04/2020	GOLUON MCA	



Chemical Oxygen Demand

0081

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

< 15

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

g/m³

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

03/04/2020

Page 10 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Gordon McArthur KTP

Sample 20/17363			Map Ref.	Date Sampled 02/04/2020 00:00		Received Order No. 2020 16:13 0
Notes: 17	79224-0 Levin Landfill Sample					
	Test	Result	Units		Test Date	Signatory
0180	BOD5 - Soluble Carbonaceous	s < 1	g/m³		02/04/2020	Marylou Cabral KTP
0602	Chloride	31.5	g/m³		03/04/2020	Amit Kumar KTP
0605	Nitrate - Nitrogen	< 0.01	g/m³		03/04/2020	Amit Kumar KTP
0607	Sulphate	20.1	g/m³		03/04/2020	Amit Kumar KTP
0760	Ammonia Nitrogen	0.10	g/m³		04/04/2020	Divina Lagazon KTP
1642	Total Hardness	50	g CaCO3/m³		03/04/2020	Amit Kumar KTP
1810	Calcium - Dissolved	7.83	g/m³		03/04/2020	Amit Kumar KTP
1819	Iron - Dissolved	0.440	g/m³		03/04/2020	Amit Kumar KTP
1822	Magnesium - Dissolved	7.51	g/m³		03/04/2020	Amit Kumar KTP
1834	Sodium - Dissolved	32.0	g/m³		03/04/2020	Amit Kumar KTP
2088	Dissolved Reactive Phosphoru	IS0.030	g/m³		04/04/2020	Divina Lagazon KTP
6701	Aluminium - Dissolved	0.002	g/m³		03/04/2020	Shanel Kumar KTP
6703	Arsenic - Dissolved	0.003	g/m³		03/04/2020	Shanel Kumar KTP
6707	Boron - Dissolved	0.04	g/m³		03/04/2020	Shanel Kumar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		03/04/2020	Shanel Kumar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		03/04/2020	Shanel Kumar KTP
6713	Copper - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kumar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kumar KTP
6721	Manganese - Dissolved	0.0703	g/m³		03/04/2020	Shanel Kumar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kumar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kumar KTP
6726	Potassium - Dissolved	6.27	g/m³		03/04/2020	Shanel Kumar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		03/04/2020	Shanel Kumar KTP
M0104	E. coli	< 4	cfu/100mL		02/04/2020	Juana Tamayo KTP
MO-5001	Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³			by Prashilla Singh Transcribed
						by
P1859	Sample Filtration	Completed			03/04/2020	Robyn Madge .
SVOC-00	12,3-Diuron	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-002	2 a-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00	3 a-chlordane	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-004	4 Aldrin	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00	5 b-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-006	6 cis-Permethrin	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-007	7 Dieldrin	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-008	8 Endosulfan II	<0.005	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00	9 Endosulfan Sulfate	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-01	0 Endrin	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-01	1 Endrin Aldehyde	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-012	2 Endrin Ketone	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-01	3 Gamma-Chlordane	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-014	4 Heptachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-01	5 Heptachlor Epoxide	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	6 Hexachlorobenzene	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	7 Lindane (g-BHC)	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	8 Methoxychlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	9 p,p'-DDD	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	0 p,p'DDE	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	1 p,p'-DDT	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
	2 Procymidone	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
J V U U - U Z Z		-0.0001	mg/L		00/04/2020	Di Alan Glanicy (TF



< 0.001

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

mg/L

03/04/2020

Page 11 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Dr Alan Stanley KTP

20/17363-04 L	ite evin G1D pdfill Sample	Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
Notes: 179224-0 Levin La Test	Result	Units		Test Date	Signatory	
SVOC-024 Endosulfan I	<0.001	mg/L		03/04/2020	Dr Alan Stan	lov KTP
SVOC-025 Alachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-026 Aldicarb	<0.1	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-027 Atrazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-028 Bromacil	<0.005	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-029 Carbofuran	<0.000	mg/L		03/04/2020	Dr Alan Stan	\$
SVOC-030 Cyanazine	<0.005	mg/L		03/04/2020	Dr Alan Stan	
SVOC-031 d-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-032 Metalaxyl-M	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-033 Metolachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-034 Metribuzin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-035 Molinate	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-037 Oxadiazon	<0.0001	mg/L		03/04/2020	Dr Alan Stan	,
SVOC-038 Pendimethalin	<0.002	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-039 Propazine	<0.002	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-040 Pyriproxyfen	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-041 Simazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-042 Terbuthylazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-043 Trifluralin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-044 Hexazinone	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-045 Chlorpyrifos	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-046 Diazinon	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-047 Dimethoate	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-048 Pirimiphos met		mg/L		03/04/2020	Dr Alan Stan	-
SVOC-049 Acenapthene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-050 Acenaphthylen		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-051 Anthracene	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-052 benz(a)anthrac		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-053 Benzo(a)pyren		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-054 Total Benzo(b) fluoranthrene		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-055 Benzo(g,h,i)per	vlene <0.001	mg/L		03/04/2020	Dr Alan Stan	lov KTP
SVOC-055 Denzo(g,n,n)per SVOC-057 Chrysene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	2
SVOC-058 Dibenz(a,h)ant		mg/L		03/04/2020	Dr Alan Stan	-
SVOC-059 Fluoranthene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-060 Fluorene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-061 Indeno(1,2,3-cd		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-062 Naphthalene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-063 Phenanthrene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-064 Pyrene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-066 2,2',3,4,4',5'-He		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-067 2,2',4,5,5'-Pent		mg/L		03/04/2020	Dr Alan Stan	-
SVOC-068 2,4,4'-Trichloro		mg/L		03/04/2020	Dr Alan Stan	-
SVOC-069 2,4-Dichlorobip		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-070 2,2',3,4,4',5',6-I	-	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-070 2,2,3,4,4,3,0,01 SVOC-072 Bis(2-ethylhexy		mg/L		03/04/2020	Dr Alan Stan	-
VOC-001 1,2,4-Trimethyl	, i	mg/L		03/04/2020	Joanna Yang	•
VOC-002 1,3,5-Trimethyl		mg/L		03/04/2020	Joanna Yang	-
VOC-002 1,3,3-11inethyl VOC-003 Benzene	<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-005 Isopropylbenze		mg/L		03/04/2020	Joanna Yang	
VOC-003 Naphthalene	<0.0005	mg/L		03/04/2020	Joanna Yang	
				03/04/2020		
VOC-008 n-Butylbenezer		mg/L		03/04/2020	Joanna Yang	JIVIE



Sample 20/17363-04	Site Levin G1D		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order No. 0
	evin Landfill Sample	– <i>"</i>				o : <i>i</i>	
Test		Result	Units		Test Date	Signatory	KTD
VOC-009 n-Propyl		< 0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-010 o-Xylene		< 0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-011 p-Isopro		< 0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-013 sec-Buty	lbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-014 Styrene		<0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-015 tert-Buty		<0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-016 Toluene		<0.0005	mg/L		03/04/2020	Joanna Yang	-
	n Xylene, Ethylbenzen	e<0.0015	mg/L		03/04/2020	Joanna Yan	-
VOC-018 1,1,1,2-1		<0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-019 1,1,1-Tri	chloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-020 1,1,2,2-1	etrachloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-021 1,1,2-Tri	chloroethane	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-022 1,1-Dich	loroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-023 1,1-Dich	loroethene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-024 1,1-Dich	loropropene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-025 1,2,3-Tri	chloropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-026 1,2-Dibro	omo-3-chloropropane	<0.001	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-027 1,2-Dibro	omoethane	<0.0002	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-028 1,2-Dich	loroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-029 1,2-Dich	loropropane	<0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-030 1,3-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-031 2,2-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-032 Allyl chlo	• •	< 0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-033 Bromoch		<0.0012	mg/L		03/04/2020	Joanna Yang	-
VOC-034 Bromom		<0.0012	mg/L		03/04/2020	Joanna Yang	-
VOC-035 Carbon		<0.001	mg/L		03/04/2020	Joanna Yang	-
VOC-036 Chloroet		<0.0003	mg/L		03/04/2020	Joanna Yang	
VOC-037 Chlorom		<0.001	-		03/04/2020	Joanna Yang	-
			mg/L				-
VOC-038 cis-1,2-E		< 0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-039 cis-1,3-E		< 0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-040 Dibromo		<0.0005	mg/L		03/04/2020	Joanna Yang	5
VOC-041 Dichloro		<0.001	mg/L		03/04/2020	Joanna Yang	-
VOC-042 Dichloro		<0.005	mg/L		03/04/2020	Joanna Yang	-
VOC-043 Hexachle	orobutadiene	<0.0002	mg/L		03/04/2020	Joanna Yan	-
VOC-044 Tetrachle	proethene	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-045 trans-1,2	2-Dichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-046 trans-1,3	-Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-047 Trichlord	ethene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-048 Trichlord	fluoromethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-049 Vinyl Ch	loride	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-050 1,2,3-Tri	chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-051 1,2,4-Tri	chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-052 1,2-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-053 1,3-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-054 1,4-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	- g KTP
VOC-055 2-Chloro		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-056 4-Chloro		< 0.0005	mg/L		03/04/2020	Joanna Yang	-
VOC-057 Bromobe		< 0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-058 Chlorobe		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-059 1,3,5-Tri		<0.0005	mg/L		03/04/2020	Joanna Yang	-
		<0.0005	-		03/04/2020		-
VOC-060 4-Methy			mg/L			Joanna Yang	-
VOC-061 Carbon	usuipniae	<0.0005	mg/L		03/04/2020	Joanna Yan	YKIP



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

Page 13 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363	Site -04 Levin G1D 79224-0 Levin Landfill Sample		Levin G1D		Date Received 02/04/2020 16:13		Order No. 0
NOLES. 17	Test	Result	Units		Test Date	Signatory	
VOC-062	Bromodichloromethane	< 0.0005	mg/L		03/04/2020	Signatory Joanna Yar	
	Bromoform	< 0.0005	mg/L		03/04/2020	Joanna Yar	•
	Chloroform	< 0.0005	mg/L		03/04/2020	Joanna Yar	-
	Dibromochloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yar	•
			-				<u> </u>
Sample 20/17363 Notes: 17	Site -06 Levin C1 /9226-0 Levin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No. 0
	Test	Result	Units		Test Date	Signatory	
0001	рН	6.7			08/04/2020	Marylou Ca	bral KTP
0002	Suspended Solids - Total	40	g/m³		08/04/2020	Jennifer Mo	nt KTP
0040	Total (NP) Organic Carbon	16.6	g/m³		10/04/2020	Sharon van	Soest KTP
0052	Alkalinity - Total	249	g CaCO3/m³		08/04/2020	Marylou Ca	bral KTP
0055	Conductivity at 25°C	127	mS/m		08/04/2020	Marylou Ca	bral KTP
0081	Chemical Oxygen Demand	54	g/m³		09/04/2020	Gordon Mc/	Arthur KTP
0180	BOD5 - Soluble Carbonaceous	1	g/m³		09/04/2020	Marylou Ca	bral KTP
0602	Chloride	217	g/m³		08/04/2020	Amit Kumar	
0605	Nitrate - Nitrogen	< 0.01	g/m³		08/04/2020	Amit Kumar	KTP
0607	Sulphate	32.6	g/m³		08/04/2020	Amit Kumar	
0760	Ammonia Nitrogen	2.91	g/m³		11/04/2020	Athena Cac	
1642	Total Hardness	306	g CaCO3/m³		11/04/2020	Shuyu Zhao	
1810	Calcium - Dissolved	52.2	g/m³		11/04/2020	Shuyu Zhao	
1819	Iron - Dissolved	2.53	g/m³		11/04/2020	Shuyu Zhao	
			-			-	
1822	Magnesium - Dissolved	42.6	g/m³		11/04/2020	Shuyu Zhao	
1834	Sodium - Dissolved	122	g/m³		11/04/2020	Shuyu Zhao	
2088	Dissolved Reactive Phosphorus		g/m³		11/04/2020	Athena Cao	
6701	Aluminium - Dissolved	0.009	g/m³		14/04/2020	Shanel Kum	
6703	Arsenic - Dissolved	< 0.001	g/m³		09/04/2020	Sharon van	
6707	Boron - Dissolved	0.57	g/m³		09/04/2020	Sharon van	Soest KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		09/04/2020	Sharon van	Soest KTP
6711	Chromium - Dissolved	< 0.001	g/m³		09/04/2020	Sharon van	Soest KTP
6713	Copper - Dissolved	0.0008	g/m³		09/04/2020	Sharon van	Soest KTP
6718	Lead - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6721	Manganese - Dissolved	0.410	g/m³		09/04/2020	Sharon van	Soest KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6724	Nickel - Dissolved	0.0012	g/m³		09/04/2020	Sharon van	Soest KTP
6726	Potassium - Dissolved	16.7	g/m³		09/04/2020	Sharon van	Soest KTP
6738	Zinc - Dissolved	< 0.002	g/m³		09/04/2020	Sharon van	Soest KTP
	E. coli	< 4	cfu/100mL		08/04/2020	Maria Norris	
	Volatile Fatty Acids	< 5 *	g/m³				Transcribed by
	Total Halogenated Phenolics	< 0.05	g/m³				Transcribed by
	Sample Filtration	Completed	9/11		08/04/2020	Freddie Bad	-
	1 2,3-Diuron	< 0.001	ma/l		08/04/2020	Joanna Yar	
			mg/L				•
SVOC-002		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	3 a-chlordane	< 0.0001	mg/L		08/04/2020	Joanna Yar	
SVOC-004		< 0.001	mg/L		08/04/2020	Joanna Yar	-
SVOC-005		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	6 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yar	
SVOC-007		<0.0001	mg/L		08/04/2020	Joanna Yar	ig KTP
SVOC-008	3 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-009	9 Endosulfan Sulfate	<0.0001	mg/L		08/04/2020	Joanna Yar	Ig KTP
SVOC-010) Endrin	<0.0001	mg/L		08/04/2020	Joanna Yar	ig KTP



SampleSite20/17363-06Levin C1Notes: 179226-0 Levin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00	Date R 08/04/2	Order No. 0	
Test	Result	Units		Test Date	Signatory	
SVOC-012 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yang	n KTP
SVOC-013 Gamma-Chlordane	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-014 Heptachlor	< 0.0001	mg/L		08/04/2020	Joanna Yan	5
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-018 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-019 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-020 p,p'DDE	< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-021 p,p'-DDT	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-022 Procymidone	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-022 Proganil	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-024 Endosulfan I	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-025 Alachlor	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-023 Alacinol SVOC-027 Atrazine	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-027 Alazine SVOC-028 Bromacil	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-029 Carbofuran	<0.003	mg/L		08/04/2020	Joanna Yang	
SVOC-020 Cyanazine	<0.001	mg/L		08/04/2020	Joanna Yang	-
SVOC-031 d-BHC	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-032 Metalaxyl-M	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-033 Metolachlor	<0.001	mg/L		08/04/2020	Joanna Yang	
SVOC-034 Metribuzin	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-035 Molinate	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-037 Oxadiazon	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-037 Oxadiazon SVOC-038 Pendimethalin	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-039 Propazine	<0.002	mg/L		08/04/2020	Joanna Yang	
SVOC-040 Pyriproxyfen	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-041 Simazine	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-042 Terbuthylazine	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-042 Telbullylazine	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-044 Hexazinone	<0.001	mg/L		08/04/2020	Joanna Yang	5
SVOC-045 Chlorpyrifos	<0.001	mg/L		08/04/2020	Joanna Yang	-
SVOC-046 Diazinon	<0.0001	mg/L		08/04/2020	Joanna Yang	5
SVOC-047 Dimethoate	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-047 Dimensionale SVOC-048 Pirimiphos methyl	<0.001	mg/L		08/04/2020	Joanna Yang	-
SVOC-049 Acenapthene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-050 Acenaphthylene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-050 Acenaphinylene	< 0.0010	mg/L		08/04/2020	Joanna Yang	
SVOC-051 Annacene SVOC-052 benz(a)anthracene	< 0.0010	mg/L		08/04/2020	Joanna Yang	
SVOC-052 Benz(a)animacene SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-053 Benzo(a)pyrene SVOC-054 Total Benzo(b) and Benzo(k)	< 0.0001	mg/L		08/04/2020	Joanna Yang	
fluoranthrene	< 0.0010	ilig/L		00/04/2020		J K I F
SVOC-055 Benzo(g,h,i)perylene	<0.001	mall		08/04/2020	Joanna Yan	
SVOC-055 Benzo(g,n,r)perylene SVOC-057 Chrysene	< 0.001	mg/L mg/L		08/04/2020	Joanna Yang	-
SVOC-057 Chrysene SVOC-058 Dibenz(a,h)anthracene	< 0.0001			08/04/2020	Joanna Yang	-
SVOC-059 Fluoranthene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-060 Fluorene		mg/L		08/04/2020		
	< 0.0001 <0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-061 Indeno(1,2,3-cd)pyrene		mg/L		08/04/2020	Joanna Yang	-
SVOC-062 Naphthalene	<0.0001	mg/L			Joanna Yang	-
SVOC-063 Phenanthrene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-064 Pyrene	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-0662,2',3,4,4',5'-Hexachlorobipher	iyru.001	mg/L		08/04/2020	Joanna Yang	yr.if



Sample Site 20/17363-06 Levin C1		Map Ref.	Date Sampled 07/04/2020 00:00		Received 2020 09:41	Order No. 0
Notes: 179226-0 Levin Landfill Sample	Desult	11		Test Dete	0	
	Result	Units		Test Date	Signatory	
SVOC-067 2,2',4,5,5'-Pentachlorobipheny		mg/L		08/04/2020	Joanna Yan	
SVOC-068 2,4,4'-Trichlorobiphenyl	< 0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-070 2,2',3,4,4',5',6-Heptachlorobiph	-	mg/L		08/04/2020	Joanna Yan	-
SVOC-072 Bis(2-ethylhexyl)adipate VOC-001 1,2,4-Trimethylbenzene	<0.0001 <0.0005	mg/L		08/04/2020 08/04/2020	Joanna Yan	•
	<0.0005	mg/L		08/04/2020	Dr Alan Star Dr Alan Star	•
VOC-002 1,3,5-Trimethylbenzene VOC-003 Benzene	<0.0005	mg/L		08/04/2020	Dr Alan Star Dr Alan Star	-
		mg/L		08/04/2020		
VOC-005 Isopropylbenzene	<0.0005	mg/L			Dr Alan Star	-
VOC-007 Naphthalene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-008 n-Butylbenezene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-009 n-Propylbenzene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-011 p-IsopropyItoluene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-013 sec-Butylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-014 Styrene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-015 tert-Butylbenzene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-016 Toluene	<0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-017 Total p,m Xylene, Ethylbenzen		mg/L		08/04/2020	Dr Alan Star	-
VOC-018 1,1,1,2-Tetrachloroethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-020 1,1,2,2-Tetrachloroethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-021 1,1,2-Trichloroethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-022 1,1-Dichloroethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-024 1,1-Dichloropropene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	•
VOC-025 1,2,3-Trichloropropane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		08/04/2020	Dr Alan Star	
VOC-027 1,2-Dibromoethane	< 0.0002	mg/L		08/04/2020	Dr Alan Star	-
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-029 1,2-Dichloropropane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	•
VOC-030 1,3-Dichloropropane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Star	,
VOC-032 Allyl chloride	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-033 Bromochloromethane	< 0.0012	mg/L		08/04/2020	Dr Alan Star	-
VOC-034 Bromomethane	< 0.001	mg/L		08/04/2020	Dr Alan Star	-
VOC-035 Carbon tetrachloride	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-036 Chloroethane	<0.001	mg/L		08/04/2020	Dr Alan Star	-
VOC-037 Chloromethane	< 0.006	mg/L		08/04/2020	Dr Alan Star	-
VOC-038 cis-1,2-Dichloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	•
VOC-039 cis-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-040 Dibromomethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-041 Dichlorodifluoromethane	< 0.001	mg/L		08/04/2020	Dr Alan Star	-
VOC-042 Dichloromethane	< 0.010	mg/L		08/04/2020	Dr Alan Star	-
VOC-043 Hexachlorobutadiene	< 0.0002	mg/L		08/04/2020	Dr Alan Star	-
VOC-044 Tetrachloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-045 trans-1,2-Dichloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-046 trans-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-047 Trichloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-049 Vinyl Chloride	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Star	ney K I P



Sample 20/17363 Notes: 17	Site -06 Levin C1 9226-0 Levin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No . 0
NO(65. 17	•	Desult	l lucito		Ta at Data	Cimentom	
	Test	Result	Units		Test Date	Signatory	
	1,2,4-Trichlorobenzene	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	-
	1,2-Dichlorobenzene	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	-
	1,3-Dichlorobenzene	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	-
	1,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
	2-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
	4-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
VOC-057	Bromobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-058	Chlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-061	Carbon disulphide	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-062	Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-063	Bromoform	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-064	Chloroform	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-065	Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
Sample	Site		Map Ref.	Date Sampled		eceived	Order No.
20/17363	-08 Levin C2ds 9228-0 Levin Landfill Sample			08/04/2020 00:00	08/04/2	2020 14:33	0
NOICES. 17	•	Descritt	11-24-		To at Data	0	
	Test	Result	Units		Test Date	Signatory	
0001	рН	7.0			08/04/2020	Gordon Mc	
0002	Suspended Solids - Total	52	g/m³		08/04/2020	Marylou Ca	
0040	Total (NP) Organic Carbon	32.0	g/m³		10/04/2020	Sharon van	Soest KTP
0052	Alkalinity - Total	716	g CaCO3/m³		08/04/2020	Gordon Mc	Arthur KTP
0055	Conductivity at 25°C	170	mS/m		08/04/2020	Gordon Mc	Arthur KTP
0081	Chemical Oxygen Demand	89	g/m³		09/04/2020	Gordon Mc	Arthur KTP
0180	BOD5 - Soluble Carbonaceous	< 6	g/m³		09/04/2020	Marylou Ca	bral KTP
0602	Chloride	125	g/m³		11/04/2020	Amit Kumai	KTP
0605	Nitrate - Nitrogen	< 0.01	g/m³		11/04/2020	Amit Kumai	KTP
0607	Sulphate	< 0.02	g/m³		11/04/2020	Amit Kumai	KTP
0760	Ammonia Nitrogen	1.79	g/m³		11/04/2020	Athena Cad)
1642	Total Hardness	589	g CaCO3/m³		11/04/2020	Shuyu Zhao	KTP
1810	Calcium - Dissolved	134	g/m³		11/04/2020	Shuyu Zhao	KTP
1819	Iron - Dissolved	22.5	g/m³		11/04/2020	Shuyu Zhao	
1822	Magnesium - Dissolved	61.7	g/m³		11/04/2020	Shuyu Zhao	
1834	Sodium - Dissolved	115	g/m³		11/04/2020	Shuyu Zhao	
2088	Dissolved Reactive Phosphorus		g/m³		11/04/2020	Athena Cac	
6701	Aluminium - Dissolved	< 0.002	g/m³		14/04/2020	Shanel Kun	
6703	Arsenic - Dissolved	0.003	g/m³		09/04/2020	Sharon van	
6705	Boron - Dissolved	0.87	g/m³		09/04/2020	Sharon van	
6708	Cadmium - Dissolved	< 0.0002	•		09/04/2020	Sharon van	
			g/m³				
6711	Chromium - Dissolved	< 0.001	g/m³		09/04/2020	Sharon van	
6713	Copper - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6718	Lead - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6721	Manganese - Dissolved	2.75	g/m³		09/04/2020	Sharon van	
6722	Mercury - Dissolved	< 0.0005	g/m³		14/04/2020	Shanel Kun	nar KTP
6724	Nickel - Dissolved	0.0029	g/m³		14/04/2020	Shanel Kun	
6726	Potassium - Dissolved	16.7	g/m³		09/04/2020	Sharon van	
6738	Zinc - Dissolved	< 0.002	g/m³		09/04/2020	Sharon van	Soest KTP
M0104	E. coli	< 4	cfu/100mL		08/04/2020	Yuemei Yu	KTP
MO-5001	Volatile Fatty Acids	< 5	g/m³			Lizzie Addis	Transcribed by
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³			Lizzie Addis	Transcribed by
P1859	Sample Filtration	Completed			09/04/2020	Robyn Mad	ge.



Sample Site 20/17363-08 Levin C2ds Notes: 179228-0 Levin Landfill Sample	2	Map Ref.	Date Sampled 08/04/2020 00:00		Received 2020 14:33	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-001 2,3-Diuron	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-002 a-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-003 a-chlordane	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-004 Aldrin	<0.001	mg/L		09/04/2020	Dr Alan Star	,
SVOC-005 b-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-006 cis-Permethrin	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-007 Dieldrin	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-008 Endosulfan II	<0.005	mg/L		09/04/2020	Dr Alan Star	
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-010 Endrin	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-011 Endrin Aldehyde	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-012 Endrin Ketone	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-013 Gamma-Chlordane	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-014 Heptachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-018 Methoxychlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	,
SVOC-019 p,p'-DDD	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-020 p,p'DDE	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-020 p,p'-DDT	<0.001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-022 Procymidone	<0.001	-		09/04/2020	Dr Alan Star	•
SVOC-022 Procynildone SVOC-023 Propanil	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-023 Fropanii SVOC-024 Endosulfan I	<0.001	mg/L		09/04/2020		
SVOC-024 Endosulian 1 SVOC-025 Alachlor	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-025 Alacilloi SVOC-027 Atrazine	<0.0001	mg/L		09/04/2020	Dr Alan Star Dr Alan Star	-
SVOC-027 Atrazine SVOC-028 Bromacil	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-028 Biomacii SVOC-029 Carbofuran	<0.005 0.004	mg/L				5
	<0.004	mg/L		09/04/2020 09/04/2020	Dr Alan Star	-
SVOC-030 Cyanazine		mg/L			Dr Alan Star	-
SVOC-031 d-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-032 Metalaxyl-M	< 0.001	mg/L		09/04/2020	Dr Alan Star Dr Alan Star	,
SVOC-033 Metolachlor	<0.0001	mg/L		09/04/2020		5
SVOC-034 Metribuzin	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-035 Molinate	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-037 Oxadiazon	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-038 Pendimethalin	< 0.002	mg/L		09/04/2020	Dr Alan Star	-
SVOC-039 Propazine	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-040 Pyriproxyfen	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-041 Simazine	< 0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-042 Terbuthylazine	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-043 Trifluralin	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-044 Hexazinone	< 0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-045 Chlorpyrifos	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-046 Diazinon	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-047 Dimethoate	< 0.001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-048 Pirimiphos methyl	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-049 Acenapthene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-050 Acenaphthylene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	
SVOC-051 Anthracene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	•
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-054 Total Benzo(b) and Benzo(k	a) < 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP



Sample 20/17363-08 Notes: 179228-0 Le	Site Levin C2ds		Map Ref.	Date Sampled 08/04/2020 00:00		Received 2020 14:33	Order No. 0
Test		Result	Units		Test Date	Signatory	
fluoranthi	ene	Result	Units		Test Date	orginatory	
SVOC-055 Benzo(g,		<0.001	mg/L		09/04/2020	Dr Alan Sta	nlev KTP
SVOC-057 Chrysene		< 0.0001	mg/L		09/04/2020	Dr Alan Sta	•
SVOC-058 Dibenz(a		< 0.0001	mg/L		09/04/2020	Dr Alan Sta	-
SVOC-059 Fluoranth		< 0.0001	mg/L		09/04/2020	Dr Alan Sta	5
SVOC-060 Fluorene		< 0.0001	mg/L		09/04/2020	Dr Alan Sta	•
SVOC-061 Indeno(1)	2.3-cd)pyrene	<0.0001	mg/L		09/04/2020	Dr Alan Sta	•
SVOC-062 Naphthal		<0.0001	mg/L		09/04/2020	Dr Alan Sta	•
SVOC-063 Phenanth		<0.0001	mg/L		09/04/2020	Dr Alan Sta	
SVOC-064 Pyrene		<0.0001	mg/L		09/04/2020	Dr Alan Sta	•
SVOC-066 2,2',3,4,4	',5'-Hexachlorobiphe		mg/L		09/04/2020	Dr Alan Sta	•
SVOC-067 2,2',4,5,5		-	mg/L		09/04/2020	Dr Alan Sta	•
SVOC-068 2,4,4'-Tri		<0.0001	mg/L		09/04/2020	Dr Alan Sta	-
SVOC-0692,4-Dichl		<0.0001	mg/L		09/04/2020	Dr Alan Sta	2
SVOC-0702,2',3,4,4			mg/L		09/04/2020	Dr Alan Sta	-
SVOC-072 Bis(2-eth		<0.0001	mg/L		09/04/2020	Dr Alan Sta	2
VOC-001 1,2,4-Trir		<0.0005	mg/L		08/04/2020	Dr Alan Sta	
VOC-002 1,3,5-Trir		<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
VOC-003 Benzene	,	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-005 Isopropyl	benzene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-007 Naphthal		<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
VOC-008 n-Butylbe		<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
VOC-009 n-Propylk		<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-010 o-Xylene		<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-011 p-Isoprop	yltoluene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-013 sec-Butyl	•	<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
VOC-014 Styrene		<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-015 tert-Butyl	benzene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-016 Toluene		<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-017 Total p,m	Xylene, Ethylbenzei	ne<0.0015	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-018 1,1,1,2-T	etrachloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-019 1,1,1-Tric	hloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-020 1,1,2,2-T	etrachloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-021 1,1,2-Tric	hloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-022 1,1-Dichle	oroethane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
VOC-023 1,1-Dichle	proethene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-024 1,1-Dichle	oropropene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-025 1,2,3-Tric	hloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-026 1,2-Dibro	mo-3-chloropropane	<0.001	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-027 1,2-Dibro	moethane	<0.0002	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-028 1,2-Dichle	oroethane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-029 1,2-Dichle		<0.0005	mg/L		08/04/2020	Dr Alan Sta	-
VOC-030 1,3-Dichle	oropropane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-031 2,2-Dichle	oropropane	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-032 Allyl chlor	ride	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-033 Bromoch		<0.0012	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-034 Bromome	ethane	<0.001	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-035 Carbon te	etrachloride	<0.0005	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-036 Chloroeth	ane	<0.001	mg/L		08/04/2020	Dr Alan Sta	nley KTP
VOC-037 Chlorome	ethane	<0.006	mg/L		08/04/2020	Dr Alan Sta	-
VOC-038 cis-1,2-D	chloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	•
-	chloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Sta	-



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

Page 19 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363			Map Ref.	Date Sampled 08/04/2020 00:00		Received Order No. 2020 14:33 0
Notes: 17	79228-0 Levin Landfill Sample Test	Result	Units		Test Date	Signatory
	Dibromomethane	<0.0005			08/04/2020	Signatory
	Dichlorodifluoromethane	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
			mg/L			Dr Alan Stanley KTP
	Dichloromethane	< 0.005	mg/L		08/04/2020	Dr Alan Stanley KTP
	Hexachlorobutadiene	< 0.0002	mg/L		08/04/2020	Dr Alan Stanley KTP
	Tetrachloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
	trans-1,2-Dichloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
	trans-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
	Trichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
	Trichlorofluoromethane	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
	Vinyl Chloride	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-053	1,3-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-054	1,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-055	2-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-057	Bromobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-058	Chlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-061	Carbon disulphide	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-062	Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-063	Bromoform	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-064	Chloroform	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
			-			•
VOC-065	Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
Sample 20/17363	Site 3-09 Levin D4	< 0.0005	mg/L Map Ref.	Date Sampled 07/04/2020 00:00	Date R	Dr Alan Stanley KTP Received Order No. 2020 09:41 0
Sample 20/17363	Site 3-09 Levin D4 79229-0 Levin Landfill Sample		Map Ref.		Date R 08/04/2	Received Order No. 2020 09:41 0
Sample 20/17363 Notes: 17	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test	Result	-		Date R 08/04/2 Test Date	Received Order No. 2020 09:41 0 Signatory
Sample 20/17363 Notes: 17	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH	Result 7.1	Map Ref. Units		Date R 08/04/2 Test Date 08/04/2020	Received Order No. 2020 09:41 0 Signatory Marylou Cabral KTP
Sample 20/17363 Notes: 17 0001 0002	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total	Result 7.1 5	Map Ref. Units g/m³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020	Received Order No. 2020 09:41 0 Signatory 0 Marylou Cabral KTP Jennifer Mont KTP
Sample 20/17363 Notes: 17 0001 0002 0040	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon	Result 7.1 5 2.4	Map Ref. Units g/m³ g/m³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 10/04/2020	Received Order No. 2020 09:41 0 Signatory Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total	Result 7.1 5 2.4 55	Map Ref. Units g/m³ g CaCO3/m³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 10/04/2020 08/04/2020	Received Order No. 2020 09:41 0 Signatory Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP Marylou Cabral KTP Sharon Van Soest KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C	Result 7.1 5 2.4 55 31.3	Map Ref. Units g/m³ g/m³ g CaCO3/m³ mS/m		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020	Received Order No. 2020 09:41 0 Signatory 0 Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Marylou Cabral KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand	Result 7.1 5 2.4 55 31.3 < 15	Map Ref. Units g/m³ g/m³ g CaCO3/m³ mS/m g/m³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020	Received Order No. 2020 09:41 0 Signatory 0 Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous	Result 7.1 5 2.4 55 31.3 < 15 < 1	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020	Received Order No. 2020 09:41 0 Signatory Order No. Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP Marylou Cabral KTP Marylou Cabral KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020 08/04/2020	Deceived Order No. 2020 09:41 0 Signatory Order No. Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP Gordon McArthur KTP Marylou Cabral KTP Marylou Cabral KTP Marylou Cabral KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020 08/04/2020 08/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTPJennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPMarylou Cabral KTPGordon McArthur KTPMarylou Cabral KTPAmit Kumar KTPArmit Kumar KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020	Received 2020 09:41Order No. 0Signatory Marylou Cabral KTP Jennifer Mont KTP Sharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP Marylou Cabral KTP Amit Kumar KTP Amit Kumar KTP Amit Kumar KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5 0.21	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTPMarylou Cabral KTP Marylou Cabral KTPGordon McArthur KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena Cao
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5 0.21 62	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP Marylou Cabral KTP Amit Kumar KTP Amit Kumar KTP Amit Kumar KTP Athena Cao Shuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5 0.21 62 11.0	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP Marylou Cabral KTP Amit Kumar KTP Amit Kumar KTP Amit Kumar KTP Amit Kumar KTP Athena Cao Shuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5 0.21 62 11.0 1.51	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTPJennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPMarylou Cabral KTPGordon McArthur KTPGordon McArthur KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTPShuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5 0.21 62 11.0	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTP Marylou Cabral KTP Marylou Cabral KTP Gordon McArthur KTP Marylou Cabral KTP Amit Kumar KTP Amit Kumar KTP Amit Kumar KTP Amit Kumar KTP Athena Cao Shuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved	Result 7.1 5 2.4 55 31.3 < 15 < 1 44.6 < 0.01 12.5 0.21 62 11.0 1.51	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTPJennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPMarylou Cabral KTPGordon McArthur KTPGordon McArthur KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTPShuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved	Result 7.1 5 2.4 55 31.3 < 15	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTPMarylou Cabral KTP Marylou Cabral KTPGordon McArthur KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTPShuyu Zhao KTPShuyu Zhao KTPShuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved	Result 7.1 5 2.4 55 31.3 < 15	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved	Result 7.1 5 2.4 55 31.3 < 15	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ g/m ³		Date R 08/04/2 7 Est Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Dissolved Reactive Phosphorus Aluminium - Dissolved	Result 7.1 5 2.4 55 31.3 < 15	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTPJennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPGordon McArthur KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTP
Sample 20/17363 Notes: 17 0001 0002 0040 0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703	Site 3-09 Levin D4 79229-0 Levin Landfill Sample Test pH Suspended Solids - Total Total (NP) Organic Carbon Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Dissolved Reactive Phosphorus Aluminium - Dissolved Arsenic - Dissolved	Result 7.1 5 2.4 55 31.3 < 15	Map Ref. Units g/m ³ g/m ³ g CaCO3/m ³ mS/m g/m ³ g/m ³		Date R 08/04/2 Test Date 08/04/2020 08/04/2020 08/04/2020 08/04/2020 08/04/2020 09/04/2020 08/04/2020 08/04/2020 08/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020 11/04/2020	Received 2020 09:41Order No. 0Signatory0Marylou Cabral KTP Jennifer Mont KTPSharon van Soest KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPGordon McArthur KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPMarylou Cabral KTPAmit Kumar KTPAmit Kumar KTPAmit Kumar KTPAthena CaoShuyu Zhao KTPShuyu Zhao KTPShanel Kumar KTPSharon van Soest KTP

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

Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 20 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363	Site 3-09 Levin D4		Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No. 0
Notes: 17	79229-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
6713	Copper - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6718	Lead - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6721	Manganese - Dissolved	0.189	g/m³		09/04/2020	Sharon van	Soest KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6726	Potassium - Dissolved	6.62	g/m³		09/04/2020	Sharon van	Soest KTP
6738	Zinc - Dissolved	< 0.002	g/m³		09/04/2020	Sharon van	Soest KTP
M0104	E. coli	< 4	cfu/100mL		08/04/2020	Maria Norris	KTP
MO-5001	Volatile Fatty Acids	< 5	g/m³			Lizzie Addis	Transcribed by
MO-5002	2 Total Halogenated Phenolics	< 0.05	g/m³			Lizzie Addis	Transcribed by
P1859	Sample Filtration	Completed			08/04/2020	Freddie Bad	raun.
SVOC-00	1 2,3-Diuron	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-002	2 a-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-00	3 a-chlordane	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-004	4 Aldrin	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-00	5 b-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-00	6 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-00	7 Dieldrin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-00	8 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-00	9 Endosulfan Sulfate	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	0 Endrin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	1 Endrin Aldehyde	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	2 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	3 Gamma-Chlordane	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-014	4 Heptachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	5 Heptachlor Epoxide	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	6 Hexachlorobenzene	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	7 Lindane (g-BHC)	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	8 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-01	9 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	0 p,p'DDE	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	1 p,p'-DDT	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	2 Procymidone	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	3 Propanil	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-024	4 Endosulfan I	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	5 Alachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	7 Atrazine	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	8 Bromacil	<0.005	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-02	9 Carbofuran	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	0 Cyanazine	<0.005	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	1 d-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	2 Metalaxyl-M	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	3 Metolachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-034	4 Metribuzin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	5 Molinate	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	7 Oxadiazon	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	8 Pendimethalin	<0.002	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-03	9 Propazine	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-04	0 Pyriproxyfen	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-04	1 Simazine	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-042	2 Terbuthylazine	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-04	3 Trifluralin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP



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

Page 21 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-0	Site 9 Levin D4		Map Ref.
	229-0 Levin Landfill Sample		
	Test	Result	Units
SVOC-044 H	Hexazinone	<0.001	mg/L
SVOC-045 (Chlorpyrifos	<0.0001	mg/L
SVOC-046 E	Diazinon	<0.0001	mg/L
SVOC-047	Dimethoate	<0.001	mg/L
SVOC-048 F	Pirimiphos methyl	<0.0001	mg/L
SVOC-049	Acenapthene	<0.0001	mg/L
SVOC-050 A	Acenaphthylene	< 0.0010	mg/L
SVOC-051 A	Anthracene	< 0.0010	mg/L
SVOC-052 b	penz(a)anthracene	< 0.0001	mg/L
SVOC-053 E	Benzo(a)pyrene	< 0.0001	mg/L
	Fotal Benzo(b) and Benzo(k) luoranthrene	< 0.0010	mg/L
SVOC-055 E	Benzo(g,h,i)perylene	<0.001	mg/L
SVOC-057 (< 0.0001	mg/L
	Dibenz(a,h)anthracene	< 0.0001	mg/L
	Fluoranthene	< 0.0001	mg/L
SVOC-060 F	luorene	< 0.0001	mg/L
SVOC-061 I	ndeno(1,2,3-cd)pyrene	<0.0001	mg/L
SVOC-062	Naphthalene	<0.0001	mg/L
	Phenanthrene	<0.0001	mg/L
SVOC-064 F	Pyrene	<0.0001	mg/L
SVOC-0662	2,2',3,4,4',5'-Hexachlorobiphen	/ ≮0.001	mg/L
SVOC-067 2	2,2',4,5,5'-Pentachlorobiphenyl	<0.0001	mg/L
SVOC-0682	2,4,4'-Trichlorobiphenyl	<0.0001	mg/L
SVOC-0692	2,4-Dichlorobiphenyl	<0.0001	mg/L
SVOC-0702	2,2',3,4,4',5',6-Heptachlorobiph	engl0001	mg/L
SVOC-072 E	Bis(2-ethylhexyl)adipate	<0.0001	mg/L
VOC-001 1	,2,4-Trimethylbenzene	<0.0005	mg/L
VOC-002 1	,3,5-Trimethylbenzene	<0.0005	mg/L
VOC-003 E	Benzene	<0.0005	mg/L
VOC-005 I	sopropylbenzene	<0.0005	mg/L
VOC-007 N	Naphthalene	<0.0005	mg/L
VOC-008 r	n-Butylbenezene	<0.0005	mg/L
VOC-009 r	n-Propylbenzene	<0.0005	mg/L
VOC-010 c	o-Xylene	<0.0005	mg/L
VOC-011 p	o-Isopropyltoluene	<0.0005	mg/L
	ec-Butylbenzene	<0.0005	mg/L
VOC-014 S		<0.0005	mg/L
	ert-Butylbenzene	<0.0005	mg/L
VOC-016 1		<0.0005	mg/L
	Total p,m Xylene, Ethylbenzene		mg/L
	1,1,1,2-Tetrachloroethane	<0.0005	mg/L
	1,1,1-Trichloroethane	<0.0005	mg/L
	,1,2,2-Tetrachloroethane	<0.0005	mg/L
	,1,2-Trichloroethane	<0.0005	mg/L
	1,1-Dichloroethane	< 0.0005	mg/L
	1,1-Dichloroethene	< 0.0005	mg/L
	,1-Dichloropropene	< 0.0005	mg/L
	,2,3-Trichloropropane	< 0.0005	mg/L
	,2-Dibromo-3-chloropropane	< 0.001	mg/L
	,2-Dibromoethane	< 0.0002	mg/L
VUC-028 1	,2-Dichloroethane	<0.0005	mg/L

Test Date	Signatory
08/04/2020	Joanna Yang KTP
08/04/2020	Joanna Yang KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
edin	

Date Received

08/04/2020 09:41

Order No.

0



Date Sampled

07/04/2020 00:00

Sample 20/17363-09	Site Levin D4		Map Ref.	Date Sampled 07/04/2020 00:00		eceived O 2020 09:41 0	rder No.
	0-0 Levin Landfill Sample						
Tes	st	Result	Units		Test Date	Signatory	
VOC-029 1,2-	Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	TP
	Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-032 Allyl		< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
-	mochloromethane	< 0.0012	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-034 Bro		<0.001	mg/L		08/04/2020	Dr Alan Stanley K	
	bon tetrachloride	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-036 Chi		<0.001	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-037 Chi		<0.006	mg/L		08/04/2020	Dr Alan Stanley K	
	1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-040 Dibr		<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	nlorodifluoromethane	<0.0003	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-042 Dich		< 0.010	mg/L		08/04/2020	Dr Alan Stanley K	
	achlorobutadiene	<0.0002	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-044 Tetr		< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	s-1,2-Dichloroethene	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	s-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-047 Tric		<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	hlorofluoromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-049 Viny		<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	4-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-055 2-Cl		<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-055 2-Cl		<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-057 Broi		<0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-058 Chlo		<0.0005	-		08/04/2020	Dr Alan Stanley K	
			mg/L				
	5-Trichlorobenzene ethyl-2-Pentanone	<0.0005 <0.0005	mg/L		08/04/2020 08/04/2020	Dr Alan Stanley K Dr Alan Stanley K	
	•		mg/L		08/04/2020		
VOC-061 Carl		< 0.0005	mg/L			Dr Alan Stanley K	
	modichloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
VOC-063 Broi VOC-064 Chlo		< 0.0005	mg/L		08/04/2020	Dr Alan Stanley K	
	romochloromethane	< 0.0005 < 0.0005	mg/L		08/04/2020 08/04/2020	Dr Alan Stanley K Dr Alan Stanley K	
	omocnioromethane	< 0.0005	mg/L		00/04/2020	DI Alan Stanley K	
Sample 20/17363-10	Site Levin B1		Map Ref.	Date Sampled 08/04/2020 00:00		eceived Or 2020 09:27 0	rder No.
	0-0 Levin Landfill Sample				_		
Tes	st	Result	Units		Test Date	Signatory	
0001 pH		6.9			09/04/2020	Jennifer Mont KT	
0002 Sus	pended Solids - Total	< 6	g/m³		09/04/2020	Gordon McArthur	
0040		00.0	1 2		40/04/0000	~ ~	

0002	Suspended Solids - Total	< 6
0040	Total (NP) Organic Carbon	22.8
0052	Alkalinity - Total	624
0055	Conductivity at 25°C	276
0081	Chemical Oxygen Demand	60
0180	BOD5 - Soluble Carbonaceous	< 1
0602	Chloride	506
0605	Nitrate - Nitrogen	1.50
0607	Sulphate	2.85
0760	Ammonia Nitrogen	16.8



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

g/m³

mS/m

g/m³

g/m³

g/m³

g/m³

g/m³

g/m³

g CaCO3/m³

10/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

11/04/2020

Page 23 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sharon van Soest KTP

Gordon McArthur KTP

Marylou Cabral KTP

Amit Kumar KTP

Amit Kumar KTP

Amit Kumar KTP

Athena Cao

Jennifer Mont KTP

Jennifer Mont KTP

Sample Site 20/17363-10

Levin B1

Notes: 179	230-0 Levin Landfill Sample		
	Test	Result	Units
1642	Total Hardness	670	g CaC
1810	Calcium - Dissolved	122	g/m³
1819	Iron - Dissolved	0.032	g/m³
1822	Magnesium - Dissolved	88.9	g/m³
1834	Sodium - Dissolved	257	g/m³
2088	Dissolved Reactive Phosphoru	s0.105	g/m³
6701	Aluminium - Dissolved	0.005	g/m³
6703	Arsenic - Dissolved	0.001	g/m³
6707	Boron - Dissolved	1.20	g/m³
6708	Cadmium - Dissolved	< 0.0002	g/m³
6711	Chromium - Dissolved	< 0.001	g/m³
6713	Copper - Dissolved	0.0094	g/m³
6718	Lead - Dissolved	< 0.0005	g/m³
6721	Manganese - Dissolved	17.5	g/m³
6722	Mercury - Dissolved	< 0.0005	g/m³
	Nickel - Dissolved	0.0045	g/m³
6726	Potassium - Dissolved	29.9	− g/m³
6738	Zinc - Dissolved	0.005	− g/m³
M0104	E. coli	< 4	cfu/10
MO-5001	Volatile Fatty Acids	< 5 *	g/m³
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³
P1859	Sample Filtration	Completed	-
SVOC-001	2,3-Diuron	<0.001	mg/L
SVOC-002	a-BHC	<0.0001	mg/L
SVOC-003	a-chlordane	<0.0001	mg/L
SVOC-004	Aldrin	<0.001	mg/L
SVOC-005	b-BHC	<0.0001	mg/L
SVOC-006	cis-Permethrin	<0.0001	mg/L
SVOC-007	Dieldrin	<0.0001	mg/L
SVOC-008	Endosulfan II	<0.005	mg/L
SVOC-009	Endosulfan Sulfate	<0.0001	mg/L
SVOC-010	Endrin	<0.0001	mg/L
SVOC-011	Endrin Aldehyde	<0.001	mg/L
SVOC-012	Endrin Ketone	<0.0001	mg/L
SVOC-013	Gamma-Chlordane	<0.001	mg/L
SVOC-014	Heptachlor	<0.0001	mg/L
SVOC-015	Heptachlor Epoxide	<0.0001	mg/L
SVOC-016	Hexachlorobenzene	<0.0001	mg/L
SVOC-017	Lindane (g-BHC)	<0.0001	mg/L
SVOC-018	Methoxychlor	<0.0001	mg/L
SVOC-019	p,p'-DDD	<0.0001	mg/L
SVOC-020	o,p'DDE	<0.0001	mg/L
SVOC-021	p,p'-DDT	<0.001	mg/L
SVOC-022	Procymidone	<0.0001	mg/L
SVOC-023	Propanil	<0.001	mg/L
SVOC-024	Endosulfan I	<0.001	mg/L
SVOC-025	Alachlor	<0.0001	mg/L
SVOC-027	Atrazine	<0.0001	mg/L
SVOC-028	Bromacil	<0.005	mg/L
SVOC-029	Carbofuran	<0.001	mg/L
SVOC-030	Cyanazine	<0.005	mg/L
SVOC-031	d-BHC	<0.0001	mg/L

Map Ref.	Date Sampled 08/04/2020 00:00
Units	
g CaCO3/m ³	
g/m³	
cfu/100mL g/m³	
g/m³	
g/m	
mg/L	

09/04/2020 Dr Alan Stanley KTP Dunedin 16 Lorne Street South Dunedin 9012 Phone: (03) 972-7963

Date Received

Test Date

11/04/2020

11/04/2020

11/04/2020

11/04/2020

11/04/2020

11/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020 09/04/2020

09/04/2020

09/04/2020

14/04/2020

09/04/2020

09/04/2020

14/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020

09/04/2020 09:27

Signatory

Shuyu Zhao KTP

Sharon van Soest KTP

Sharon van Soest KTP

Sharon van Soest KTP Sharon van Soest KTP

Sharon van Soest KTP

Sharon van Soest KTP

Sharon van Soest KTP

Sharon van Soest KTP

Sharon van Soest KTP

Sharon van Soest KTP

Sunita Raju Transcribed by Sunita Raju Transcribed by

Shanel Kumar KTP

Shanel Kumar KTP

Maria Norris KTP

Robyn Madge .

Dr Alan Stanley KTP

Athena Cao

Order No.

Ω

Rolleston

43 Detroit Drive

Rolleston 7675

Wellington

85 Port Road, Seaview

Lower Hutt 5045

Phone: (04) 576-5016

Sample Sit 20/17363-10 Lev Notes: 179230-0 Levin Lan	vin B1	Map Ref.	Date Sampled 08/04/2020 00:00		eceived 2020 09:27	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-032 Metalaxyl-M	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-033 Metolachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-034 Metribuzin	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-035 Molinate	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-037 Oxadiazon	<0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-038 Pendimethalin	<0.002	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-039 Propazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-041 Simazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-042 Terbuthylazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-043 Trifluralin	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-044 Hexazinone	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-046 Diazinon	<0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-047 Dimethoate	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-048 Pirimiphos methy	/l <0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-049 Acenapthene	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-051 Anthracene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-052 benz(a)anthrace	ne < 0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-054 Total Benzo(b) a fluoranthrene	nd Benzo(k) < 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-055 Benzo(g,h,i)pery	lene <0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-057 Chrysene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-058 Dibenz(a,h)anthr	acene < 0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-060 Fluorene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-061 Indeno(1,2,3-cd)	pyrene <0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-062 Naphthalene	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-064 Pyrene	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-066 2,2',3,4,4',5'-Hex	achlorobiphenyk0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-067 2,2',4,5,5'-Penta	chlorobiphenyl <0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-068 2,4,4'-Trichlorobi	phenyl <0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-0692,4-Dichlorobiph	enyl <0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-070 2,2',3,4,4',5',6-He	eptachlorobiphen%00001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-072 Bis(2-ethylhexyl)	adipate 0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
VOC-001 1,2,4-Trimethylbe	enzene <0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-002 1,3,5-Trimethylbe	enzene <0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-003 Benzene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-005 Isopropylbenzen	e <0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-007 Naphthalene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-008 n-Butylbenezene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-009 n-Propylbenzene	< 0.0005	mg/L		09/04/2020	Dr Alan Star	ley KTP
VOC-010 o-Xylene	<0.0005	mg/L		09/04/2020	Dr Alan Star	ley KTP
VOC-011 p-Isopropyltoluer	ne <0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-013 sec-Butylbenzen	e 0.0007	mg/L		09/04/2020	Dr Alan Star	ley KTP
VOC-014 Styrene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-015 tert-Butylbenzen	e <0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-016 Toluene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-017 Total p,m Xylene	, Ethylbenzene<0.0015	mg/L		09/04/2020	Dr Alan Star	nley KTP



Sample 20/17363-10	Site Levin B1		Map Ref.	Date Sampled 08/04/2020 00:00		leceived 2020 09:27	Order No 0
Notes: 179230-0 Le	evin Landfill Sample						
Test		Result	Units		Test Date	Signatory	
/OC-018 1,1,1,2-T	etrachloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-019 1,1,1-Tri	chloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-020 1,1,2,2-T	etrachloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-021 1,1,2-Tri	chloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-022 1,1-Dich	oroethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-023 1,1-Dich	oroethene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-024 1,1-Dich	oropropene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-025 1,2,3-Tri	chloropropane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-026 1,2-Dibro	omo-3-chloropropane	<0.001	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-027 1,2-Dibro	omoethane	<0.0002	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-028 1,2-Dich	oroethane	0.0006	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-029 1,2-Dich	oropropane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-030 1,3-Dich	oropropane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-031 2,2-Dich	oropropane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-032 Allyl chlo	ride	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-033 Bromoch	loromethane	<0.0012	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-034 Bromom	ethane	<0.001	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-035 Carbon t	etrachloride	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-036 Chloroet	hane	<0.001	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-037 Chlorom	ethane	<0.006	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-038 cis-1,2-D	lichloroethene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-039 cis-1,3-D	lichloropropene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-040 Dibromo	methane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-041 Dichloro	difluoromethane	<0.001	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-042 Dichloro	methane	<0.005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-043 Hexachle	probutadiene	<0.0002	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-044 Tetrachle	proethene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-045 trans-1,2	-Dichloroethene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-046 trans-1,3	-Dichloropropene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
OC-047 Trichloro	ethene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-048 Trichloro	fluoromethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-049 Vinyl Ch	oride	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-050 1,2,3-Tri	chlorobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-051 1,2,4-Tri	chlorobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
/OC-052 1,2-Dich	orobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	-
/OC-053 1,3-Dich	orobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	-
/OC-054 1,4-Dich	orobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-055 2-Chloro	toluene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
OC-056 4-Chloro	toluene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-057 Bromobe	enzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-058 Chlorobe	enzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	
OC-059 1,3,5-Tri		<0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-060 4-Methyl		< 0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-061 Carbon 0		< 0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-062 Bromodi	•	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-063 Bromofo		< 0.0005	mg/L		09/04/2020	Dr Alan Sta	-
OC-064 Chlorofo		< 0.0005	mg/L		09/04/2020	Dr Alan Sta	
	chloromethane	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	-



Sample Site 20/17363-11 Levin B2

Notes: 179231-0 Levin Landfill Sample

Notes. 17	9231-0 Levin Landill Sample	
	Test	Result
0001	рН	6.9
0002	Suspended Solids - Total	9
0040	Total (NP) Organic Carbon	31.7
0052	Alkalinity - Total	723
0055	Conductivity at 25°C	209
0081	Chemical Oxygen Demand	81
0180	BOD5 - Soluble Carbonaceous	< 1
0602	Chloride	141
0605	Nitrate - Nitrogen	21.8
0607	Sulphate	8.85
0760	Ammonia Nitrogen	51.6
1642	Total Hardness	546
1810	Calcium - Dissolved	117
1819	Iron - Dissolved	0.722
1822	Magnesium - Dissolved	61.6
1834	Sodium - Dissolved	115
2088	Dissolved Reactive Phosphorus	0.021
6701	Aluminium - Dissolved	0.009
6703	Arsenic - Dissolved	0.006
6707	Boron - Dissolved	1.69
6708	Cadmium - Dissolved	< 0.0002
6711	Chromium - Dissolved	0.001
6713	Copper - Dissolved	0.0031
6718	Lead - Dissolved	< 0.0005
6721	Manganese - Dissolved	4.33
6722	Mercury - Dissolved	< 0.0005
6724	Nickel - Dissolved	0.0030
6726	Potassium - Dissolved	57.6
6738	Zinc - Dissolved	0.004
M0104	E. coli	< 4
MO-5001	Volatile Fatty Acids	< 5 *
	Total Halogenated Phenolics	< 0.05
	Sample Filtration	Completed
	2,3-Diuron	<0.001
SVOC-002	a-BHC	<0.0001
SVOC-003	a-chlordane	<0.0001
SVOC-004	Aldrin	<0.001
SVOC-005	b-BHC	<0.0001
SVOC-006	cis-Permethrin	<0.0001
SVOC-007	Dieldrin	<0.0001
SVOC-008	Endosulfan II	<0.005
	Endosulfan Sulfate	<0.0001
SVOC-010		< 0.0001
	Endrin Aldehyde	<0.001
	Endrin Ketone	<0.0001
	Gamma-Chlordane	<0.001
	Heptachlor	<0.0001
	Heptachlor Epoxide	<0.0001
	Hexachlorobenzene	<0.0001
	Lindane (g-BHC)	<0.0001
	Methoxychlor	<0.0001
SVOC-018	-	<0.0001
2,20-019		5.0001

ар кеі.
Units
g/m³
g/m³
g CaCO3/m³
mS/m
g/m³
g CaCO3/m³
g/m³ g/m³
g/m³
g/m³ g/m³
cfu/100mL
g/m ³
g/m³
0
mg/L
mg/L mg/L
mg/L

Map Ref.

Date Sampled 08/04/2020 00:00

Date Received 09/04/2020 09:27

Order No. 0

09/04/2	020 09:27 0
Test Date	Signatory
09/04/2020	Jennifer Mont KTP
09/04/2020	Gordon McArthur KTP
10/04/2020	Sharon van Soest KTP
09/04/2020	Jennifer Mont KTP
09/04/2020	Jennifer Mont KTP
09/04/2020	Gordon McArthur KTP
09/04/2020	Marylou Cabral KTP
09/04/2020	Amit Kumar KTP
09/04/2020	Amit Kumar KTP
09/04/2020	Amit Kumar KTP
11/04/2020	Athena Cao
11/04/2020	Shuyu Zhao KTP
11/04/2020	Athena Cao
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
14/04/2020	Shanel Kumar KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Sharon van Soest KTP
14/04/2020	Shanel Kumar KTP
09/04/2020	Sharon van Soest KTP
09/04/2020	Maria Norris KTP
	Sunita Raju Transcribed by
	Sunita Raju Transcribed by
09/04/2020	Robyn Madge .
09/04/2020	Dr Alan Stanley KTP



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

SampleSite20/17363-11LevinNotes: 179231-0 Levin Landfil		Map Ref.	Date Sampled 08/04/2020 00:00		eceived 2020 09:27	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-020 p,p'DDE	<0.0001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-021 p,p'-DDT	<0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-022 Procymidone	<0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-023 Propanil	<0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-024 Endosulfan I	<0.001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-025 Alachlor	<0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-027 Atrazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-028 Bromacil	<0.005	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-029 Carbofuran	<0.001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-030 Cyanazine	<0.005	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-031 d-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-032 Metalaxyl-M	<0.001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-033 Metolachlor	<0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-034 Metribuzin	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-035 Molinate	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-037 Oxadiazon	<0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-038 Pendimethalin	<0.002	mg/L		09/04/2020	Dr Alan Stan	
SVOC-039 Propazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-040 Pyriproxyfen	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-041 Simazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-042 Terbuthylazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-043 Trifluralin	<0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-044 Hexazinone	<0.001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-046 Diazinon	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-047 Dimethoate	<0.001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-049 Acenapthene	<0.0001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-051 Anthracene	< 0.0010	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-054 Total Benzo(b) and fluoranthrene	Benzo(k) < 0.0010	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-055 Benzo(g,h,i)perylen	e <0.001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-057 Chrysene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-058 Dibenz(a,h)anthrac	ene < 0.0001	mg/L		09/04/2020	Dr Alan Stan	lley KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-060 Fluorene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-061 Indeno(1,2,3-cd)pyr	rene <0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-062 Naphthalene	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-063 Phenanthrene	<0.0001	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-064 Pyrene	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-066 2,2',3,4,4',5'-Hexacl	nlorobiphenyk0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-067 2,2',4,5,5'-Pentachle		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-068 2,4,4'-Trichlorobiph	enyl <0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-069 2,4-Dichlorobipheny		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-070 2,2',3,4,4',5',6-Hept		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-072 Bis(2-ethylhexyl)adi		mg/L		09/04/2020	Dr Alan Stan	-
VOC-001 1,2,4-Trimethylbenz		mg/L		09/04/2020	Dr Alan Stan	-
VOC-002 1,3,5-Trimethylbenz		mg/L		09/04/2020	Dr Alan Stan	-
,., ,.		5				



SampleSite20/17363-11Levin B2Notes: 179231-0 Levin Landfill Sample		Map Ref.	Date Sampled 08/04/2020 00:00		eceived 2020 09:27	Order No. 0
	Result	Units		Test Date	Signatory	
Test VOC-005 Isopropylbenzene	0.0006	mg/L		09/04/2020	Signatory Dr Alan Stan	
VOC-003 Isopropyidenzene VOC-007 Naphthalene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	
VOC-008 n-Butylbenezene	<0.0005	-		09/04/2020	Dr Alan Stan	-
VOC-009 n-Propylbenzene	<0.0005	mg/L mg/L		09/04/2020	Dr Alan Stan	5
VOC-010 o-Xylene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-013 sec-Butylbenzene	0.0007	mg/L		09/04/2020	Dr Alan Stan	•
VOC-014 Styrene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-015 tert-Butylbenzene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-016 Toluene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-017 Total p,m Xylene, Ethylbenzer		mg/L		09/04/2020	Dr Alan Stan	•
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-021 1,1,2,2-Trichloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	•
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-026 1,2-Dibromo-3-chloropropane	<0.0003	mg/L		09/04/2020	Dr Alan Stan	
VOC-027 1,2-Dibromoethane	<0.0002			09/04/2020	Dr Alan Stan	•
VOC-027 1,2-Dichloroethane	<0.0002 0.0007	mg/L		09/04/2020		-
·		mg/L			Dr Alan Stan	-
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		09/04/2020 09/04/2020	Dr Alan Stan	
VOC-031 2,2-Dichloropropane	<0.0005 <0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-032 Allyl chloride VOC-033 Bromochloromethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-034 Bromomethane	<0.0012	mg/L		09/04/2020	Dr Alan Stan Dr Alan Stan	-
VOC-035 Carbon tetrachloride	<0.001	mg/L		09/04/2020		5
VOC-036 Chloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
	< 0.001	mg/L		09/04/2020	Dr Alan Stan	-
VOC-037 Chloromethane VOC-038 cis-1,2-Dichloroethene	<0.000	mg/L			Dr Alan Stan Dr Alan Stan	•
VOC-039 cis-1,2-Dichloropropene	<0.0005 <0.0005	mg/L		09/04/2020 09/04/2020	Dr Alan Stan	•
VOC-040 Dibromomethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-040 Diblomomethane	<0.0005 <0.001	mg/L		09/04/2020		5
VOC-041 Dichloromethane	<0.001	mg/L		09/04/2020	Dr Alan Stan	-
VOC-042 Dichloromethane VOC-043 Hexachlorobutadiene	<0.005 <0.0002	mg/L		09/04/2020	Dr Alan Stan Dr Alan Stan	-
VOC-043 Tetrachloroethene	<0.0002	mg/L		09/04/2020		
VOC-044 Tetrachioroethene	<0.0005 <0.0005	mg/L		09/04/2020	Dr Alan Stan	-
		mg/L		09/04/2020	Dr Alan Stan	-
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L			Dr Alan Stan	-
VOC-047 Trichloroethene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		09/04/2020	Dr Alan Stan	5
VOC-049 Vinyl Chloride	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-051 1,2,4-Trichlorobenzene	< 0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-052 1,2-Dichlorobenzene	0.0006	mg/L		09/04/2020	Dr Alan Stan	•
VOC-053 1,3-Dichlorobenzene	0.0008	mg/L		09/04/2020	Dr Alan Stan	-
VOC-054 1,4-Dichlorobenzene	0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-055 2-Chlorotoluene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	-
VOC-056 4-Chlorotoluene	<0.0005	mg/L		09/04/2020	Dr Alan Stan	•
VOC-057 Bromobenzene	< 0.0005	mg/L		09/04/2020	Dr Alan Stan	
VOC-058 Chlorobenzene	0.0098	mg/L		09/04/2020	Dr Alan Stan	ICY NIP



Sample 20/17363-			Map Ref.	Date Sampled 08/04/2020 00:00		Received 2020 09:27	Order No. 0
NOTES: 178	9231-0 Levin Landfill Sample	Booult	11:40		Test Data	Cianat	
	Test	Result <0.0005	Units		Test Date	Signatory	
	1,3,5-Trichlorobenzene		mg/L		09/04/2020	Dr Alan Stan	-
	4-Methyl-2-Pentanone	< 0.0005	mg/L		09/04/2020	Dr Alan Stan	-
	Carbon disulphide Bromodichloromethane	< 0.0005	mg/L		09/04/2020	Dr Alan Stan	-
		< 0.0005 < 0.0005	mg/L		09/04/2020	Dr Alan Stan	-
	Bromoform Chloroform	< 0.0005	mg/L		09/04/2020 09/04/2020	Dr Alan Stan	•
	Dibromochloromethane	< 0.0005	mg/L mg/L		09/04/2020	Dr Alan Stan Dr Alan Stan	-
Sample 20/17363-			Map Ref.	Date Sampled 08/04/2020 00:00	Date R	Received 2020 09:27	Order No.
Notes: 179	9232-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
	рН	7.1			11/04/2020	Marylou Cab	
	Suspended Solids - Total	74	g/m³		09/04/2020	Gordon McA	
	Total (NP) Organic Carbon	70.6	g/m³		10/04/2020	Sharon van S	
	Alkalinity - Total	1,180	g CaCO3/m³		11/04/2020	Jennifer Mor	nt KTP
	Conductivity at 25°C	288	mS/m		11/04/2020	Marylou Cab	
	Chemical Oxygen Demand	213	g/m³		09/04/2020	Gordon McA	
	BOD5 - Soluble Carbonaceous	< 6	g/m³		09/04/2020	Marylou Cab	ral KTP
	Chloride	194	g/m³		09/04/2020	Amit Kumar	
0605	Nitrate - Nitrogen	< 0.10	g/m³		09/04/2020	Amit Kumar	KTP
0607	Sulphate	< 0.02	g/m³		09/04/2020	Amit Kumar	KTP
0760	Ammonia Nitrogen	143	g/m³		11/04/2020	Athena Cao	
1642	Total Hardness	509	g CaCO3/m³		11/04/2020	Shuyu Zhao	KTP
1810	Calcium - Dissolved	89.7	g/m³		11/04/2020	Shuyu Zhao	KTP
1819	Iron - Dissolved	1.03	g/m³		11/04/2020	Shuyu Zhao	KTP
1822	Magnesium - Dissolved	69.2	g/m³		11/04/2020	Shuyu Zhao	KTP
1834	Sodium - Dissolved	152	g/m³		11/04/2020	Shuyu Zhao	KTP
2088	Dissolved Reactive Phosphorus	s0.031	g/m³		11/04/2020	Athena Cao	
6701	Aluminium - Dissolved	0.007	g/m³		09/04/2020	Sharon van S	Soest KTP
6703	Arsenic - Dissolved	0.035	g/m³		09/04/2020	Sharon van S	Soest KTP
6707	Boron - Dissolved	1.40	g/m³		09/04/2020	Sharon van S	Soest KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		09/04/2020	Sharon van S	Soest KTP
6711	Chromium - Dissolved	0.005	g/m³		09/04/2020	Sharon van S	Soest KTP
6713	Copper - Dissolved	0.0007	g/m³		09/04/2020	Sharon van S	Soest KTP
6718	Lead - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6721	Manganese - Dissolved	4.84	g/m³		09/04/2020	Sharon van	Soest KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	Soest KTP
6724	Nickel - Dissolved	0.0136	g/m³		09/04/2020	Sharon van S	Soest KTP
6726	Potassium - Dissolved	91.5	g/m³		14/04/2020	Shanel Kum	ar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		09/04/2020	Sharon van	Soest KTP
M0104	E. coli	< 4	cfu/100mL		09/04/2020	Maria Norris	КТР
	Volatile Fatty Acids	< 5	g/m³				Transcribed by
	Total Halogenated Phenolics	< 0.05	g/m³			-	Transcribed by
	Sample Filtration	Completed	č		09/04/2020	Robyn Madg	-
	2,3-Diuron	<0.001	mg/L		09/04/2020	Dr Alan Stan	
SVOC-002		<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
	a-chlordane	<0.0001	mg/L		09/04/2020	Dr Alan Stan	
SVOC-003		<0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-004		<0.001	mg/L		09/04/2020	Dr Alan Stan	-
//00-000		<0.0001	•		09/04/2020	Dr Alan Stan	-
SVOC_006		-0.0001	mg/L		03/04/2020	Di Mail Sidli	ICY IN IF
SVOC-006 SVOC-007		<0.0001	mg/L		09/04/2020	Dr Alan Stan	



Sample Site 20/17363-12 Levin B3s Notes: 179232-0 Levin Landfill Sam		Map Ref.	Date Sampled 08/04/2020 00:00		Received 2020 09:27	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-009 Endosulfan Sulfate	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-009 Endosulari Sullate	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-011 Endrin Aldehyde	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-012 Endrin Ketone	<0.001	mg/L		09/04/2020	Dr Alan Star	,
SVOC-012 Endin Retone	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-013 Gamma-Chlordane	<0.001	-		09/04/2020	Dr Alan Star	•
SVOC-014 Heptachlor Epoxide	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-015 Hexachlorobenzene	<0.0001	mg/L mg/L		09/04/2020	Dr Alan Star	-
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-017 Lindane (g-Bric)	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
•	<0.0001	-		09/04/2020		-
SVOC-019 p,p'-DDD		mg/L		09/04/2020	Dr Alan Star	-
SVOC-020 p,p'DDE	<0.0001	mg/L			Dr Alan Star	-
SVOC-021 p,p'-DDT	< 0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-022 Procymidone	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-023 Propanil	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-024 Endosulfan I	< 0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-025 Alachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-027 Atrazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	,
SVOC-028 Bromacil	<0.005	mg/L		09/04/2020	Dr Alan Star	-
SVOC-029 Carbofuran	0.011	mg/L		09/04/2020	Dr Alan Star	-
SVOC-030 Cyanazine	<0.005	mg/L		09/04/2020	Dr Alan Star	-
SVOC-031 d-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		09/04/2020	Dr Alan Star	,
SVOC-033 Metolachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-034 Metribuzin	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-035 Molinate	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-038 Pendimethalin	<0.002	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-039 Propazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-041 Simazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-042 Terbuthylazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-043 Trifluralin	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-044 Hexazinone	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-046 Diazinon	<0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-047 Dimethoate	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-049 Acenapthene	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-051 Anthracene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-054 Total Benzo(b) and Benz fluoranthrene	co(k) < 0.0010	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		09/04/2020	Dr Alan Star	nlev KTP
SVOC-057 Chrysene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-059 Fluoranthene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-060 Fluorene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-061 Indeno(1,2,3-cd)pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
		-				-
SVOC-062 Naphthalene	<0.0001	mg/L		09/04/2020	Dr Alan Star	INCY NIP



Sample 20/17363-12 Notes: 179232-0 Le	Site Levin B3s vin Landfill Sample		Map Ref.	Date Sampled 08/04/2020 00:00		eceived 2020 09:27	Order 0
Test		Result	Units		Test Date	Signatory	
SVOC-063 Phenanth	irene	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-064 Pyrene		<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-066 2,2',3,4,4	',5'-Hexachlorobiphe	nyk0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-067 2,2',4,5,5	-Pentachlorobiphen	yl <0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-068 2,4,4'-Tri	chlorobiphenyl	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-0692,4-Dichl	orobiphenyl	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-070 2,2',3,4,4	',5',6-Heptachlorobip	hen@10001	mg/L		09/04/2020	Dr Alan Star	nley KTP
SVOC-072 Bis(2-eth	ylhexyl)adipate	<0.0001	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-001 1,2,4-Trir	nethylbenzene	0.0008	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-002 1,3,5-Trir	nethylbenzene	0.0007	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-003 Benzene		0.0015	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-005 Isopropyl	benzene	0.0008	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-007 Naphthal	ene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-008 n-Butylbe	enezene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-009 n-Propylk	enzene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-010 o-Xylene		<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-011 p-Isoprop	yltoluene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-013 sec-Butyl	benzene	0.0007	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-014 Styrene		<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-015 tert-Butyl	benzene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-016 Toluene		<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-017 Total p,m	Xylene, Ethylbenzer	ne<0.0015	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-018 1,1,1,2-T	etrachloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-019 1,1,1-Tric	hloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-020 1,1,2,2-T	etrachloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-021 1,1,2-Tric	chloroethane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-022 1,1-Dichl	oroethane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-023 1,1-Dichl	oroethene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-024 1,1-Dichl	oropropene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-025 1,2,3-Tric	chloropropane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-026 1,2-Dibro	mo-3-chloropropane	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-027 1,2-Dibro	moethane	<0.0002	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-028 1,2-Dichl	oroethane	0.0009	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-029 1,2-Dichl	oropropane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-030 1,3-Dichl	oropropane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-031 2,2-Dichl	oropropane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-032 Allyl chlo	ride	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-033 Bromoch	loromethane	<0.0012	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-034 Bromome	ethane	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-035 Carbon te	etrachloride	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-036 Chloroeth	nane	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-037 Chlorome	ethane	<0.006	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-038 cis-1,2-D	ichloroethene	0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-039 cis-1,3-D	ichloropropene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-040 Dibromor	nethane	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-041 Dichloroc	lifluoromethane	<0.001	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-042 Dichloror	nethane	<0.005	mg/L		09/04/2020	Dr Alan Star	-
VOC-043 Hexachlo		<0.0002	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-044 Tetrachlo	roethene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-045 trans-1,2	-Dichloroethene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP
VOC-046 trans-1,3-	Dichloropropene	<0.0005	mg/L		09/04/2020	Dr Alan Star	ley KTP
VOC-047 Trichloro	ethene	<0.0005	mg/L		09/04/2020	Dr Alan Star	nley KTP



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

Page 32 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Order No.

Sample 20/17363	Site -12 Levin B3s /9232-0 Levin Landfill Sample		Map Ref.	Date Sampled 08/04/2020 00:00		eceived 2020 09:27	Order No. 0
101000.17	Test	Result	Units		Test Date	Signatory	
VOC-048	Trichlorofluoromethane	<0.0005	mg/L		09/04/2020	Dr Alan Sta	nlev KTP
VOC-049	Vinyl Chloride	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	2
	1,2,3-Trichlorobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	•
	1,2,4-Trichlorobenzene	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	•
	1,2-Dichlorobenzene	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	-
	1,3-Dichlorobenzene	0.0008	mg/L		09/04/2020	Dr Alan Star	2
	1,4-Dichlorobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Star	2
	2-Chlorotoluene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	•
	4-Chlorotoluene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	•
	Bromobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	•
VOC-058	Chlorobenzene	0.0011	mg/L		09/04/2020	Dr Alan Sta	•
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L		09/04/2020	Dr Alan Sta	•
	4-Methyl-2-Pentanone	<0.0005	mg/L		09/04/2020	Dr Alan Sta	2
	Carbon disulphide	<0.0005	mg/L		09/04/2020	Dr Alan Sta	•
	Bromodichloromethane	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	•
VOC-063	Bromoform	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	•
VOC-064	Chloroform	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
VOC-065	Dibromochloromethane	< 0.0005	mg/L		09/04/2020	Dr Alan Sta	nley KTP
Sample 20/17363			Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No. 0
Notes: 17	79233-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
0001	рН	7.2			08/04/2020	Marylou Cal	
0002	Suspended Solids - Total	7	g/m³		08/04/2020	Jennifer Mo	
0040	Total (NP) Organic Carbon	5.2	g/m³		10/04/2020	Sharon van	
0052	Alkalinity - Total	68	g CaCO3/m³		08/04/2020	Marylou Cal	
0055	Conductivity at 25°C	27.1	mS/m		08/04/2020	Marylou Cal	
0081	Chemical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McA	
0180	BOD5 - Soluble Carbonaceous		g/m³		09/04/2020	Marylou Cal	
0602	Chloride	28.7	g/m³		09/04/2020	Amit Kumar	
0605	Nitrate - Nitrogen	< 0.01	g/m³		09/04/2020	Amit Kumar	
0607	Sulphate	9.10	g/m³		09/04/2020	Amit Kumar	
0760	Ammonia Nitrogen	0.17	g/m³		11/04/2020	Athena Cao	
1642	Total Hardness	59	g CaCO3/m³		11/04/2020	Shuyu Zhac	
1810	Calcium - Dissolved	11.0	g/m³		11/04/2020	Shuyu Zhac	
1819	Iron - Dissolved	4.65	g/m³		11/04/2020	Shuyu Zhao	
1822	Magnesium - Dissolved	7.62	g/m³		11/04/2020	Shuyu Zhao	
1834	Sodium - Dissolved	28.9	g/m³		11/04/2020	Shuyu Zhac	
2088	Dissolved Reactive Phosphorus		g/m³		11/04/2020	Athena Cao	
6701	Aluminium - Dissolved	0.006	g/m³		14/04/2020	Shanel Kurr	
6703	Arsenic - Dissolved	0.002	g/m³		09/04/2020	Sharon van	
6707	Boron - Dissolved	0.03	g/m³		09/04/2020	Sharon van	
6708	Cadmium - Dissolved	< 0.0002	g/m³		09/04/2020	Sharon van	
6711	Chromium - Dissolved	< 0.001	g/m³		09/04/2020	Sharon van	
6713 6719	Copper - Dissolved	0.0006	g/m³		09/04/2020	Sharon van	
6718 6721	Lead - Dissolved	0.0005	g/m³		09/04/2020	Sharon van	
6721 6722	Manganese - Dissolved	0.243	g/m³		09/04/2020	Sharon van	
6722	Mercury - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6724	Nickel - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6726	Potassium - Dissolved	6.22	g/m³		09/04/2020	Sharon van	
6738	Zinc - Dissolved	< 0.002	g/m³		09/04/2020	Sharon van	
M0104	E. coli	< 4	cfu/100mL		08/04/2020	Maria Norris	



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

Page 33 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

	ite evin E1s		Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No . 0
	nuilli Sample	Becult	Unito		Toot Data	Signatory	
Test MO-5001 Volatile Fatty Ad	oide	Result < 5	Units g/m³		Test Date	Signatory	Transcribed by
MO-5002 Total Halogenat		< 0.05	g/m³				Transcribed by
P1859 Sample Filtratio			y/m		08/04/2020	Freddie Bad	-
SVOC-001 2,3-Diuron	11	Completed <0.001	ma/l		08/04/2020	Joanna Yan	
SVOC-0012,3-Didion		<0.001	mg/L mg/L		08/04/2020	Joanna Yan	-
SVOC-002 a-chlordane		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-004 Aldrin		<0.0001	mg/L		08/04/2020	Joanna Yan	5
SVOC-005 b-BHC		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-006 cis-Permethrin		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-007 Dieldrin		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-008 Endosulfan II		< 0.005	mg/L		08/04/2020	Joanna Yang	-
SVOC-009 Endosulfan Sulf	fate	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-010 Endrin		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-011 Endrin Aldehyde	e	<0.001	mg/L		08/04/2020	Joanna Yan	5
SVOC-012 Endrin Ketone		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-013 Gamma-Chlord	ane	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-014 Heptachlor		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-015 Heptachlor Epo	xide	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-016 Hexachloroben		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-017 Lindane (g-BH		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-018 Methoxychlor	- /	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-019 p,p'-DDD		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-020 p,p'DDE		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-021 p,p'-DDT		< 0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-022 Procymidone		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-023 Propanil		<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-024 Endosulfan I		<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-025 Alachlor		<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-027 Atrazine		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-028 Bromacil		<0.005	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-029 Carbofuran		<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-030 Cyanazine		<0.005	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-031 d-BHC		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-032 Metalaxyl-M		<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-033 Metolachlor		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-034 Metribuzin		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-035 Molinate		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-037 Oxadiazon		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-038 Pendimethalin		<0.002	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-039 Propazine		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-040 Pyriproxyfen		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-041 Simazine		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-042 Terbuthylazine		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-043 Trifluralin		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-044 Hexazinone		<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-045 Chlorpyrifos		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-046 Diazinon		<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-047 Dimethoate		<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-048 Pirimiphos meth	nyl	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-049 Acenapthene		<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-050 Acenaphthylene	e	< 0.0010	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-051 Anthracene		< 0.0010	mg/L		08/04/2020	Joanna Yan	



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 34 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

SampleSite20/17363-13Levin E1sNotes: 179233-0 Levin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00		Received 2020 09:41	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yang	n KTP
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-054 Total Benzo(b) and Benzo(k)	< 0.0010	mg/L		08/04/2020	Joanna Yang	-
fluoranthrene	\$ 0.0010	iiig/L		00/04/2020		<i>y</i> 1.11
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		08/04/2020	Joanna Yang	NKTP
SVOC-057 Chrysene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-059 Fluoranthene	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-060 Fluorene	< 0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-062 Naphthalene	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-063 Phenanthrene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-064 Pyrene	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphe		mg/L		08/04/2020	Joanna Yang	
SVOC-067 2,2',4,5.5'-Pentachlorobiphen	•	mg/L		08/04/2020	Joanna Yang	-
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yang	•
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-070 2,2',3,4,4',5',6-Heptachlorobip		mg/L		08/04/2020	Joanna Yang	-
SVOC-072 Bis(2-ethylhexyl)adipate	<0.0001	mg/L		08/04/2020	Joanna Yang	
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	•
VOC-003 Benzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-005 Isopropylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-007 Naphthalene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	
VOC-008 n-Butylbenezene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-009 n-Propylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-010 o-Xylene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-013 sec-Butylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-014 Styrene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-015 tert-Butylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	,
VOC-016 Toluene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	•
VOC-017 Total p,m Xylene, Ethylbenzei		mg/L		08/04/2020	Dr Alan Stan	
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	•
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	•
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	•
VOC-026 1,2-Dibromo-3-chloropropane		mg/L		08/04/2020	Dr Alan Stan	-
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		08/04/2020	Dr Alan Stan	-
VOC-028 1,2-Dichloroethane	<0.0002	mg/L		08/04/2020	Dr Alan Stan	-
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-032 Anyl childholde VOC-033 Bromochloromethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-033 Bromochloromethane	<0.0012 <0.001	mg/L		08/04/2020	Dr Alan Stan	-
	<0.001 <0.0005	-		08/04/2020	Dr Alan Stan	-
VOC-035 Carbon tetrachloride		mg/L				
VOC-036 Chloroethane	<0.001	mg/L		08/04/2020	Dr Alan Stan	



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 35 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-13 Notes: 179233-(Site Levin E1s D Levin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00	Date Received 08/04/2020 09:41		Order No. 0	
Test		Result	Units		Test Date	Signatory		
VOC-037 Chlor		<0.006	mg/L		08/04/2020	Dr Alan Stanl	ev KTP	
	2-Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	-	
	3-Dichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
OC-039 Cis-1,		<0.0005	mg/L		08/04/2020	Dr Alan Stan	•	
	prodifluoromethane	<0.0005	- 		08/04/2020	Dr Alan Stan	,	
OC-041 Dichic		< 0.001	mg/L		08/04/2020	Dr Alan Stan	,	
	chlorobutadiene	< 0.010	mg/L		08/04/2020		-	
		<0.0002	mg/L		08/04/2020	Dr Alan Stanl	•	
OC-044 Tetra		<0.0005	mg/L		08/04/2020	Dr Alan Stanl Dr Alan Stanl	•	
	1,2-Dichloroethene		mg/L		08/04/2020		-	
OC-046 trans- OC-047 Trichl	1,3-Dichloropropene	< 0.0005	mg/L			Dr Alan Stanl	•	
		< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
	orofluoromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
OC-049 Vinyl		< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
	Trichlorobenzene	< 0.0005	mg/L		08/04/2020	Dr Alan Stanl		
	Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	-	
,	ichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	-	
	ichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
	ichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
OC-055 2-Chl		<0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
OC-056 4-Chl	orotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	•	
OC-057 Brom	obenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-058 Chlor	obenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-059 1,3,5-	Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-060 4-Met	thyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-061 Carbo	on disulphide	<0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-062 Brom	odichloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-063 Brom	oform	< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-064 Chlor	oform	< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
OC-065 Dibro	mochloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanl	ey KTP	
ample 0/17363-14	Site Levin E2s		Map Ref.	Date Sampled 07/04/2020 00:00		Date Received Order 08/04/2020 09:41 0		
	0 Levin Landfill Sample			0110 112020 00.00			0	
Test		Result	Units		Test Date	Signatory		
0001 pH		7.6			08/04/2020	Marylou Cabr	al KTP	
0002 Suspe	ended Solids - Total	< 5	g/m³		08/04/2020	Jennifer Mon	t KTP	
0040 Total	(NP) Organic Carbon	2.9	g/m³		10/04/2020	Sharon van S	oest KTP	
0052 Alkali	nity - Total	146	g CaCO3/m³		08/04/2020	Marylou Cabi	al KTP	
	uctivity at 25°C	44.9	mS/m		08/04/2020	Marylou Cabi		
	nical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McAr		
	5 - Soluble Carbonaceous		g/m³		09/04/2020	Marylou Cabi		
0602 Chlori		40.7	g/m³		09/04/2020	Amit Kumar k		
	e - Nitrogen	< 0.01	g/m³		09/04/2020	Amit Kumar k		
0607 Sulph	-	< 0.02	g/m³		09/04/2020	Amit Kumar k		
•	onia Nitrogen	0.25	g/m³		11/04/2020	Athena Cao	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
	0		0					
	Hardness	119 26.0	g CaCO3/m³		11/04/2020	Shuyu Zhao I		
	um - Dissolved		g/m³		11/04/2020	Shuyu Zhao I		
	Dissolved	0.047	g/m³		11/04/2020	Shuyu Zhao I		
-	esium - Dissolved	13.0	g/m³		11/04/2020	Shuyu Zhao I		
	im - Dissolved	41.2	g/m³		11/04/2020	Shuyu Zhao I	11P	
	lved Reactive Phosphorus		g/m³		11/04/2020	Athena Cao		
	nium - Dissolved	0.004	g/m³		09/04/2020	Sharon van S		
6703 Arsen	nic - Dissolved	0.001	g/m³		09/04/2020	Sharon van S	oest KTP	
1999		Wellington	Rolleston	5	unedin			

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

Page 36 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

_

Sample 20/17363	Site -14 Levin E2s 79234-0 Levin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00	Date Received 08/04/2020 09:41		Order No. 0
10003.17	Test	Result	Units		Test Date	Signatory	
6707	Boron - Dissolved	0.05	g/m³		09/04/2020	Signatory Sharon van	Sooot KTD
6708	Cadmium - Dissolved	< 0.0002	g/m³		09/04/2020	Sharon van	
6711	Chromium - Dissolved	< 0.001	-		09/04/2020	Sharon van	
6713	Copper - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6718	Lead - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6721	Manganese - Dissolved		g/m³		09/04/2020	Sharon van	
6721	0	0.386 < 0.0005	g/m³		09/04/2020	Sharon van	
6722	Mercury - Dissolved Nickel - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van	
6724	Potassium - Dissolved	< 0.0005 6.46	g/m³ g/m³		09/04/2020	Sharon van	
6738	Zinc - Dissolved	0.003	U U		09/04/2020	Sharon van	
M0104	E. coli	< 4	g/m³ cfu/100mL		09/04/2020		
		*			00/04/2020	Maria Norris	
	Volatile Fatty Acids	< 5	g/m³				Transcribed by
	Total Halogenated Phenolics	< 0.05	g/m³		00/04/2020		Transcribed by
P1859	Sample Filtration	Completed			08/04/2020	Freddie Bad	
	12,3-Diuron	< 0.001	mg/L		08/04/2020	Joanna Yar	-
SVOC-002		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	3 a-chlordane	< 0.0001	mg/L		08/04/2020	Joanna Yar	0
SVOC-004		< 0.001	mg/L		08/04/2020	Joanna Yar	-
SVOC-00		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	6 cis-Permethrin	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-007		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	8 Endosulfan II	< 0.005	mg/L		08/04/2020	Joanna Yan	-
	9 Endosulfan Sulfate	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-010		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	1 Endrin Aldehyde	< 0.001	mg/L		08/04/2020	Joanna Yar	-
	2 Endrin Ketone	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	3 Gamma-Chlordane	< 0.001	mg/L		08/04/2020	Joanna Yar	0
	4 Heptachlor	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	5 Heptachlor Epoxide	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	6 Hexachlorobenzene	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	7 Lindane (g-BHC)	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	8 Methoxychlor	< 0.0001	mg/L		08/04/2020	Joanna Yar	0
SVOC-019		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-020		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-02	1.1	< 0.001	mg/L		08/04/2020	Joanna Yar	-
	2 Procymidone	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-02	•	< 0.001	mg/L		08/04/2020	Joanna Yar	0
	4 Endosulfan I	< 0.001	mg/L		08/04/2020	Joanna Yar	-
SVOC-02		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-02		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-028		< 0.005	mg/L		08/04/2020	Joanna Yar	-
	9 Carbofuran	< 0.001	mg/L		08/04/2020	Joanna Yar	-
	0 Cyanazine	< 0.005	mg/L		08/04/2020	Joanna Yar	-
SVOC-03		<0.0001	mg/L		08/04/2020	Joanna Yar	-
	2 Metalaxyl-M	< 0.001	mg/L		08/04/2020	Joanna Yar	-
	3 Metolachlor	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	4 Metribuzin	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-03		< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	7 Oxadiazon	< 0.0001	mg/L		08/04/2020	Joanna Yar	-
	8 Pendimethalin	<0.002	mg/L		08/04/2020	Joanna Yar	-
	9 Propazine	<0.0001	mg/L		08/04/2020	Joanna Yar	-
SVOC-040	0 Pyriproxyfen	<0.0001	mg/L		08/04/2020	Joanna Yar	gkip



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

Page 37 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-14	Site Levin E2s		Map Ref.	Date Sampled 07/04/2020 00:00
	evin Landfill Sample			
Test		Result	Units	
SVOC-041 Simazin		<0.0001	mg/L	
SVOC-042 Terbuthy		<0.0001	mg/L	
SVOC-043 Triflurali		<0.0001	mg/L	
SVOC-044 Hexazin		<0.001	mg/L	
SVOC-045 Chlorpyr	rifos	<0.0001	mg/L	
SVOC-046 Diazinor		<0.0001	mg/L	
SVOC-047 Dimetho		<0.001	mg/L	
SVOC-048 Pirimiph	-	<0.0001	mg/L	
SVOC-049 Acenapt		<0.0001	mg/L	
SVOC-050 Acenapt	•	< 0.0010	mg/L	
SVOC-051 Anthrace	ene	< 0.0010	mg/L	
SVOC-052 benz(a)a		< 0.0001	mg/L	
SVOC-053 Benzo(a		< 0.0001	mg/L	
SVOC-054 Total Be fluoranth	nzo(b) and Benzo(k) hrene	< 0.0010	mg/L	
SVOC-055 Benzo(g	,h,i)pervlene	<0.001	mg/L	
SVOC-057 Chrysen		< 0.0001	mg/L	
SVOC-058 Dibenz(a		< 0.0001	mg/L	
SVOC-059 Fluorant		< 0.0001	mg/L	
SVOC-060 Fluorene	e	< 0.0001	mg/L	
SVOC-061 Indeno(1	1,2,3-cd)pyrene	<0.0001	mg/L	
SVOC-062 Naphtha	llene	<0.0001	mg/L	
SVOC-063 Phenant		<0.0001	mg/L	
SVOC-064 Pyrene		<0.0001	mg/L	
SVOC-066 2,2',3,4,4	4',5'-Hexachlorobiphe	enyk0.001	mg/L	
SVOC-067 2,2',4,5,	5'-Pentachlorobiphen	iyl <0.0001	mg/L	
SVOC-068 2,4,4'-Tr	ichlorobiphenyl	<0.0001	mg/L	
SVOC-0692,4-Dich	lorobiphenyl	<0.0001	mg/L	
SVOC-070 2,2',3,4,4	4',5',6-Heptachlorobi	ohen@10001	mg/L	
SVOC-072 Bis(2-eth	nylhexyl)adipate	<0.0001	mg/L	
VOC-001 1,2,4-Tri	methylbenzene	<0.0005	mg/L	
VOC-002 1,3,5-Tri	imethylbenzene	<0.0005	mg/L	
VOC-003 Benzene	e	<0.0005	mg/L	
VOC-005 Isopropy	/lbenzene	<0.0005	mg/L	
VOC-007 Naphtha	llene	<0.0005	mg/L	
VOC-008 n-Butylb	enezene	<0.0005	mg/L	
VOC-009 n-Propyl	benzene	<0.0005	mg/L	
VOC-010 o-Xylene	e	<0.0005	mg/L	
VOC-011 p-Isopro	pyltoluene	<0.0005	mg/L	
VOC-013 sec-Buty	/lbenzene	<0.0005	mg/L	
VOC-014 Styrene		<0.0005	mg/L	
VOC-015 tert-Buty	lbenzene	<0.0005	mg/L	
VOC-016 Toluene		<0.0005	mg/L	
VOC-017 Total p,r	n Xylene, Ethylbenze	ene<0.0015	mg/L	
VOC-018 1,1,1,2-7	Tetrachloroethane	<0.0005	mg/L	
VOC-019 1,1,1-Tri	chloroethane	<0.0005	mg/L	
VOC-020 1,1,2,2-1	Tetrachloroethane	<0.0005	mg/L	
VOC-021 1,1,2-Tri	chloroethane	<0.0005	mg/L	
VOC-022 1,1-Dich		<0.0005	mg/L	
VOC-023 1,1-Dich	loroethene	<0.0005	mg/L	
			···· ·· //	
VOC-024 1,1-Dich	loropropene	<0.0005	mg/L	

Test Date	Signatory
08/04/2020	Joanna Yang KTP
08/04/2020	Joanna Yang KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	•
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP
	Dr Alan Stanley KTP
08/04/2020	Dr Alan Stanley KTP

Date Received

08/04/2020 09:41

Order No.

0



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

Sample Site 20/17363-14 Lev	e rin E2s	Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No 0
Notes: 179234-0 Levin Land	dfill Sample					
Test	Result	Units		Test Date	Signatory	
OC-026 1,2-Dibromo-3-ch	nloropropane <0.001	mg/L		08/04/2020	Dr Alan Star	ley KTP
OC-027 1,2-Dibromoetha	ne <0.0002	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-028 1,2-Dichloroethar	ne <0.0005	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-029 1,2-Dichloropropa	ane <0.0005	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-030 1,3-Dichloropropa	ane <0.0005	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-031 2,2-Dichloropropa	ane <0.0005	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-032 Allyl chloride	<0.0005	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-033 Bromochlorometh	hane <0.0012	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-034 Bromomethane	<0.001	mg/L		08/04/2020	Dr Alan Star	ley KTP
OC-035 Carbon tetrachlor	ride <0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
OC-036 Chloroethane	< 0.001	mg/L		08/04/2020	Dr Alan Star	lley KTP
OC-037 Chloromethane	< 0.006	mg/L		08/04/2020	Dr Alan Star	ley KTP
OC-038 cis-1,2-Dichloroe	thene <0.0005	mg/L		08/04/2020	Dr Alan Star	-
OC-039 cis-1,3-Dichlorop	ropene <0.0005	mg/L		08/04/2020	Dr Alan Star	-
OC-040 Dibromomethane	•	mg/L		08/04/2020	Dr Alan Star	ley KTP
OC-041 Dichlorodifluorom		mg/L		08/04/2020	Dr Alan Star	•
OC-042 Dichloromethane	< 0.010	mg/L		08/04/2020	Dr Alan Star	•
OC-043 Hexachlorobutad		mg/L		08/04/2020	Dr Alan Star	-
OC-044 Tetrachloroethen		mg/L		08/04/2020	Dr Alan Star	•
OC-045 trans-1,2-Dichloro		mg/L		08/04/2020	Dr Alan Star	•
OC-046 trans-1,3-Dichloro		mg/L		08/04/2020	Dr Alan Stan	•
OC-047 Trichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Star	•
OC-048 Trichlorofluorome		mg/L		08/04/2020	Dr Alan Star	-
OC-049 Vinyl Chloride	< 0.0005	mg/L		08/04/2020	Dr Alan Star	•
OC-050 1,2,3-Trichlorobe		mg/L		08/04/2020	Dr Alan Star	•
OC-051 1,2,4-Trichlorobe		mg/L		08/04/2020	Dr Alan Star	•
OC-052 1,2-Dichlorobenz		mg/L		08/04/2020	Dr Alan Star	•
OC-053 1,3-Dichlorobenz		mg/L		08/04/2020	Dr Alan Star	•
OC-054 1,4-Dichlorobenz		mg/L		08/04/2020	Dr Alan Star	•
OC-055 2-Chlorotoluene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	•
OC-056 4-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Star	•
OC-050 4-Chilofololuene	<0.0005	-		08/04/2020	Dr Alan Star	
OC-057 Biomobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
OC-059 1,3,5-Trichlorobe		mg/L		08/04/2020	Dr Alan Star	•
		mg/L				-
OC-060 4-Methyl-2-Penta		mg/L		08/04/2020	Dr Alan Star	-
OC-061 Carbon disulphid		mg/L		08/04/2020	Dr Alan Star	-
OC-062 Bromodichlorome		mg/L		08/04/2020	Dr Alan Star	-
OC-063 Bromoform	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
OC-064 Chloroform	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
OC-065 Dibromochlorome	ethane < 0.0005	mg/L		08/04/2020	Dr Alan Star	iley KTP

Notes: 179236-0 Levin Landfill Sample

	Test	Result
0001	рН	6.3
0002	Suspended Solids - Total	17
0040	Total (NP) Organic Carbon	13.2
0052	Alkalinity - Total	109
0055	Conductivity at 25°C	33.6
0081	Chemical Oxygen Demand	31
0180	BOD5 - Soluble Carbonaceous	< 3
0602	Chloride	32.8



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

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

Units

g/m³

g/m³

mS/m

g/m³

g/m³

g/m³

g CaCO3/m³

Signatory

Marylou Cabral KTP Jennifer Mont KTP

Sharon van Soest KTP

Marylou Cabral KTP

Marylou Cabral KTP

Marylou Cabral KTP

Amit Kumar KTP

Gordon McArthur KTP

Test Date

08/04/2020

08/04/2020

09/04/2020

08/04/2020

08/04/2020

09/04/2020

09/04/2020

08/04/2020

Sample 20/17363	Site 3-16 Levin D2 79236-0 Levin Landfill Sample	5 5	Map Ref.	Date Sampled 01/04/2020 00:00		Received Order No. 2020 14:28 0
Note3. 17	Test	Result	Units		Test Date	Signatory
0605	Nitrate - Nitrogen	< 0.01	g/m³		08/04/2020	Amit Kumar KTP
0607	Sulphate	< 0.02	g/m³		08/04/2020	Amit Kumar KTP
0760	Ammonia Nitrogen	0.49	g/m³		11/04/2020	Athena Cao
1642	Total Hardness	87	g CaCO3/m³		09/04/2020	Amit Kumar KTP
1810	Calcium - Dissolved	15.4	g/m³		09/04/2020	Amit Kumar KTP
1819	Iron - Dissolved	15.0	g/m³		09/04/2020	Amit Kumar KTP
1822	Magnesium - Dissolved	11.8	g/m³		09/04/2020	Amit Kumar KTP
1834	Sodium - Dissolved	32.6	g/m³		09/04/2020	Amit Kumar KTP
2088	Dissolved Reactive Phospho	orus0.038	g/m³		11/04/2020	Athena Cao
6701	Aluminium - Dissolved	0.014	g/m³		08/04/2020	Sharon van Soest KTP
6703	Arsenic - Dissolved	0.001	g/m³		08/04/2020	Sharon van Soest KTP
6707	Boron - Dissolved	0.04	g/m³		08/04/2020	Sharon van Soest KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		08/04/2020	Sharon van Soest KTP
6711	Chromium - Dissolved	0.001	g/m³		08/04/2020	Sharon van Soest KTP
6713	Copper - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van Soest KTP
6718	Lead - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van Soest KTP
6721	Manganese - Dissolved	0.306	g/m³		08/04/2020	Sharon van Soest KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van Soest KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van Soest KTP
6726	Potassium - Dissolved	7.10	g/m³		08/04/2020	Sharon van Soest KTP
6738	Zinc - Dissolved	0.005	g/m³		08/04/2020	Sharon van Soest KTP
M0104	E. coli	< 4	cfu/100mL		07/04/2020	Yuemei Yu KTP
MO-5001	Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed
MO-5002	Total Halogenated Phenolics	s < 0.05	g/m³			by Prashilla Singh Transcribed
						by
P1859	Sample Filtration	Completed			08/04/2020	Freddie Badraun .
SVOC-001	12,3-Diuron	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-002	2 a-BHC	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-003	3 a-chlordane	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-004	4 Aldrin	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-005	5 b-BHC	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-006	6 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-007	7 Dieldrin	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-008	8 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yang KTP
SVOC-009	9 Endosulfan Sulfate	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-010	0 Endrin	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-011	1 Endrin Aldehyde	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-012	2 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-013	3 Gamma-Chlordane	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-014	4 Heptachlor	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-015	5 Heptachlor Epoxide	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-016	6 Hexachlorobenzene	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-017	7 Lindane (g-BHC)	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-018	8 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
	9 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-020		<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-021		<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-022	2 Procymidone	<0.0001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-023	3 Propanil	<0.001	mg/L		08/04/2020	Joanna Yang KTP
SVOC-024	4 Endosulfan I	<0.001	mg/L		08/04/2020	Joanna Yang KTP
		10 0001			00/04/0000	

SVOC-025 Alachlor

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

<0.0001

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

mg/L

Page 40 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

08/04/2020 Joanna Yang KTP

Sample 20/17363-16 Notes: 179236-0 Lev	Site Levin D2		Map Ref.	Date Sampled 01/04/2020 00:00		Date Received 07/04/2020 14:28	
Test		Result	Units		Test Date	Signatory	
SVOC-027 Atrazine		<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-028 Bromacil		<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-029 Carbofurar		<0.003	mg/L		08/04/2020	Joanna Yang	-
SVOC-029 Carbolitar		<0.001	mg/L		08/04/2020	Joanna Yang	-
SVOC-031 d-BHC		<0.000	mg/L		08/04/2020	Joanna Yang	
SVOC-032 Metalaxyl-l	1	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-032 Metalaxyi-		<0.001	mg/L		08/04/2020	Joanna Yang	-
SVOC-034 Metribuzin	1	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-035 Molinate		<0.0001	•		08/04/2020		-
SVOC-037 Oxadiazon		<0.0001	mg/L mg/L		08/04/2020	Joanna Yang Joanna Yang	-
SVOC-037 Oxadiazon		<0.0001			08/04/2020		-
	ain		mg/L			Joanna Yang	-
SVOC-039 Propazine		<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-040 Pyriproxyfe	en	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-041 Simazine		< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-042 Terbuthyla	zine	< 0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-043 Trifluralin		<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-044 Hexazinon		<0.001	mg/L		08/04/2020	Joanna Yang	-
SVOC-045 Chlorpyrifo	S	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-046 Diazinon		<0.0001	mg/L		08/04/2020	Joanna Yang	
SVOC-047 Dimethoate	9	<0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-048 Pirimiphos	methyl	<0.0001	mg/L		08/04/2020	Joanna Yang	-
SVOC-049 Acenapthe	ne	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-050 Acenaphth	ylene	< 0.0010	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-051 Anthracene	e	< 0.0010	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-052 benz(a)ant	hracene	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-053 Benzo(a)p	yrene	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-054 Total Benz	o(b) and Benzo(k)	< 0.0010	mg/L		08/04/2020	Joanna Yang	g KTP
fluoranthre	ne						
SVOC-055 Benzo(g,h,	i)perylene	<0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-057 Chrysene		< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-059 Fluoranthe	ne	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-060 Fluorene		< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-061 Indeno(1,2	,3-cd)pyrene	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-062 Naphthaler	ne	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-063 Phenanthr	ene	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-064 Pyrene		<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-066 2,2',3,4,4',	5'-Hexachlorobiphen	yk0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-067 2,2',4,5,5'-	Pentachlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-068 2,4,4'-Trich	lorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-069 2,4-Dichlor	obiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-070 2,2',3,4,4',	5',6-Heptachlorobiph	en@10001	mg/L		08/04/2020	Joanna Yan	-
SVOC-072 Bis(2-ethyl		0.0002	mg/L		08/04/2020	Joanna Yang	-
VOC-001 1,2,4-Trime	ethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-002 1,3,5-Trime	5	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-003 Benzene	-	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-005 Isopropylb	enzene	< 0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-007 Naphthalei		< 0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-008 n-Butylben		< 0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-009 n-Propylbe		< 0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-010 o-Xylene	00	<0.0005	mg/L		08/04/2020	Joanna Yang	-
VOC-010 0-Xylene VOC-011 p-Isopropy	Itoluene	<0.0005	•		08/04/2020	Joanna Yang	-
		-0.0005	mg/L		00/04/2020		91711-



SampleSite20/17363-16Levin D2Notes: 179236-0 Levin Landfill Sample		Map Ref.	Date Sampled 01/04/2020 00:00	Date R 07/04/2
Test	Result	Units		Test Date
VOC-013 sec-Butylbenzene	<0.0005	mg/L		08/04/2020
VOC-014 Styrene	<0.0005	mg/L		08/04/2020
VOC-015 tert-Butylbenzene	<0.0005	mg/L		08/04/2020
VOC-016 Toluene	<0.0005	mg/L		08/04/2020
VOC-017 Total p,m Xylene, Ethylbenzer		mg/L		08/04/2020
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		08/04/2020
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		08/04/2020
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		08/04/2020
VOC-022 1,1-Dichloroethene	<0.0005	mg/L		08/04/2020
VOC-023 1,1-Dichloropropene	<0.0005	mg/L		08/04/2020
VOC-024 1,1-Dichloropropene VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		08/04/2020
	<0.0005	-		08/04/2020
VOC-026 1,2-Dibromo-3-chloropropane VOC-027 1,2-Dibromoethane	<0.001	mg/L		08/04/2020
		mg/L		
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		08/04/2020 08/04/2020
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		08/04/2020
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		08/04/2020
VOC-032 Allyl chloride	<0.0005	mg/L		08/04/2020
VOC-033 Bromochloromethane	<0.0012	mg/L		08/04/2020
VOC-034 Bromomethane	< 0.001	mg/L		08/04/2020
VOC-035 Carbon tetrachloride	<0.0005	mg/L		08/04/2020
VOC-036 Chloroethane	<0.001	mg/L		08/04/2020
VOC-037 Chloromethane	< 0.006	mg/L		08/04/2020
VOC-038 cis-1,2-Dichloroethene	< 0.0005	mg/L		08/04/2020
VOC-039 cis-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020
VOC-040 Dibromomethane	< 0.0005	mg/L		08/04/2020
VOC-041 Dichlorodifluoromethane	< 0.001	mg/L		08/04/2020
VOC-042 Dichloromethane	<0.005	mg/L		08/04/2020
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		08/04/2020
VOC-044 Tetrachloroethene	<0.0005	mg/L		08/04/2020
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		08/04/2020
VOC-047 Trichloroethene	<0.0005	mg/L		08/04/2020
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		08/04/2020
VOC-049 Vinyl Chloride	<0.0005	mg/L		08/04/2020
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		08/04/2020
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		08/04/2020
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		08/04/2020
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020
VOC-055 2-Chlorotoluene	<0.0005	mg/L		08/04/2020
VOC-056 4-Chlorotoluene	<0.0005	mg/L		08/04/2020
VOC-057 Bromobenzene	<0.0005	mg/L		08/04/2020
VOC-058 Chlorobenzene	<0.0005	mg/L		08/04/2020
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		08/04/2020
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		08/04/2020
VOC-061 Carbon disulphide	<0.0005	mg/L		08/04/2020
VOC-062 Bromodichloromethane	< 0.0005	mg/L		08/04/2020
VOC-063 Bromoform	< 0.0005	mg/L		08/04/2020
VOC-064 Chloroform	< 0.0005	mg/L		08/04/2020



Date Received

07/04/2020 14.28

Signatory

Joanna Yang KTP

Joanna Yang KTP Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Joanna Yang KTP

Order No.

Ω

Sample 20/17363 Notes: 17	Site 3-16 Levin D2 79236-0 Levin Landfill Sample		Map Ref.	Date Sampled 01/04/2020 00:00		eceived 2020 14:28	Order No. 0
	Test	Result	Units		Test Date	Signatory	
VOC-065	Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
Sample 20/17363 Notes: 17	Site 3-17 Levin D3r 79237-0 Levin Landfill Sample		Map Ref.	Date Sampled 01/04/2020 00:00		eceived 2020 14:28	Order No. 0
	Test	Result	Units		Test Date	Signatory	
0001	рН	7.0			08/04/2020	Marylou Cat	oral KTP
0002	Suspended Solids - Total	< 6	g/m³		08/04/2020	Jennifer Mor	nt KTP
0040	Total (NP) Organic Carbon	3.1	g/m³		09/04/2020	Sharon van	Soest KTP
0052	Alkalinity - Total	56	g CaCO3/m³		08/04/2020	Marylou Cab	oral KTP
0055	Conductivity at 25°C	21.4	mS/m		08/04/2020	Marylou Cab	oral KTP
0081	Chemical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McA	rthur KTP
0180	BOD5 - Soluble Carbonaceous	< 1	g/m³		09/04/2020	Marylou Cat	oral KTP
0602	Chloride	21.7	g/m³		08/04/2020	Amit Kumar	КТР
0605	Nitrate - Nitrogen	0.18	g/m³		08/04/2020	Amit Kumar	КТР
0607	Sulphate	6.96	g/m³		08/04/2020	Amit Kumar	КТР
0760	Ammonia Nitrogen	0.18	g/m³		11/04/2020	Athena Cao	
1642	Total Hardness	34	g CaCO3/m³		09/04/2020	Amit Kumar	КТР
1810	Calcium - Dissolved	6.81	g/m³		09/04/2020	Amit Kumar	КТР
1819	Iron - Dissolved	2.86	g/m³		09/04/2020	Amit Kumar	КТР
1822	Magnesium - Dissolved	4.19	g/m³		09/04/2020	Amit Kumar	KTP
1834	Sodium - Dissolved	27.3	g/m³		09/04/2020	Amit Kumar	KTP
2088	Dissolved Reactive Phosphorus	s0.015	g/m³		11/04/2020	Athena Cao	
6701	Aluminium - Dissolved	< 0.002	g/m³		08/04/2020	Sharon van	Soest KTP
6703	Arsenic - Dissolved	0.011	g/m³		08/04/2020	Sharon van	Soest KTP
6707	Boron - Dissolved	< 0.03	g/m³		08/04/2020	Sharon van	Soest KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		08/04/2020	Sharon van	Soest KTP
6711	Chromium - Dissolved	< 0.001	g/m³		08/04/2020	Sharon van	Soest KTP
6713	Copper - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van	Soest KTP
6718	Lead - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van	Soest KTP
6721	Manganese - Dissolved	0.176	g/m³		08/04/2020	Sharon van	Soest KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van	Soest KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		08/04/2020	Sharon van	Soest KTP
6726	Potassium - Dissolved	4.90	g/m³		08/04/2020	Sharon van	Soest KTP
6738	Zinc - Dissolved	< 0.002	g/m³		08/04/2020	Sharon van	Soest KTP
M0104	E. coli	< 4	cfu/100mL		07/04/2020	Yuemei Yu ł	KTP
MO-5001	Volatile Fatty Acids	< 5	g/m³			Prashilla Sin	gh Transcribed
						by	
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sin by	gh Transcribed
P1859	Sample Filtration	Completed			08/04/2020	Freddie Bad	raun .
SVOC-007	12,3-Diuron	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-002	2 a-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-003	3 a-chlordane	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-004	4 Aldrin	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-005	5 b-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-006	6 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-007	7 Dieldrin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-008	8 Endosulfan II	<0.005	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-009	9 Endosulfan Sulfate	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-010	0 Endrin	<0.0001	mg/L		08/04/2020	Joanna Yan	-
	1 Endrin Aldehyde	<0.001	mg/L		08/04/2020	Joanna Yan	
SVOC-012	2 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 43 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

SampleSite20/17363-17Levin D3rNotes: 179237-0 Levin Landfill Sample		Map Ref.	Date Sampled 01/04/2020 00:00	Date Received 07/04/2020 14:28		Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-013 Gamma-Chlordane	<0.001	mg/L		08/04/2020	Joanna Yan	a KTP
SVOC-014 Heptachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-015 Heptachlor Epoxide	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-016 Hexachlorobenzene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-017 Lindane (g-BHC)	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-018 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-019 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-020 p,p'DDE	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-020 p,p DDL SVOC-021 p,p'-DDT	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-022 Procymidone	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-022 Proganil	<0.001	mg/L		08/04/2020	Joanna Yan	•
SVOC-023 Flopanii SVOC-024 Endosulfan I	<0.001			08/04/2020	Joanna Yan	•
SVOC-024 Endosulian 1 SVOC-025 Alachlor	<0.001	mg/L		08/04/2020	Joanna Yan	•
SVOC-023 Alachion SVOC-027 Atrazine	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-027 Atrazine SVOC-028 Bromacil	<0.0001	mg/L		08/04/2020		-
SVOC-028 Bromach SVOC-029 Carbofuran	<0.005	mg/L		08/04/2020	Joanna Yan	•
		mg/L			Joanna Yan	-
SVOC-030 Cyanazine	<0.005	mg/L		08/04/2020 08/04/2020	Joanna Yan	-
SVOC-031 d-BHC	<0.0001	mg/L			Joanna Yan	
SVOC-032 Metalaxyl-M	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-033 Metolachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-034 Metribuzin	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-035 Molinate	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-037 Oxadiazon	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-038 Pendimethalin	<0.002	mg/L		08/04/2020	Joanna Yan	-
SVOC-039 Propazine	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-040 Pyriproxyfen	<0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-041 Simazine	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-042 Terbuthylazine	<0.0001	mg/L		08/04/2020	Joanna Yan	0
SVOC-043 Trifluralin	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-044 Hexazinone	< 0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-045 Chlorpyrifos	< 0.0001	mg/L		08/04/2020	Joanna Yan	•
SVOC-046 Diazinon	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-047 Dimethoate	< 0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-049 Acenapthene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-050 Acenaphthylene	< 0.0010	mg/L		08/04/2020	Joanna Yan	•
SVOC-051 Anthracene	< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-052 benz(a)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-054 Total Benzo(b) and Benzo(k) fluoranthrene	< 0.0010	mg/L		08/04/2020	Joanna Yan	gkip
SVOC-055 Benzo(g,h,i)perylene	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-057 Chrysene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-060 Fluorene	< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-062 Naphthalene	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-064 Pyrene	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-066 2,2',3,4,4',5'-Hexachlorobiphe	eny≮0.001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-067 2,2',4,5,5'-Pentachlorobiphen	yl <0.0001	mg/L		08/04/2020	Joanna Yan	g KTP



SampleSite20/17363-17Levin D3rNotes: 170227 0 Levin Landfill Sample		Map Ref.	Date Sampled 01/04/2020 00:00		Received 2020 14:28	Order No. 0
Notes: 179237-0 Levin Landfill Sample	Decult	Unito		Test Data	Cignoton	
	Result	Units		Test Date	Signatory	
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-0692,4-Dichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-070 2,2',3,4,4',5',6-Heptachlorobip	-	mg/L		08/04/2020	Joanna Yan	-
SVOC-072 Bis(2-ethylhexyl)adipate	< 0.0001	mg/L		08/04/2020	Joanna Yan	-
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	•
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-003 Benzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-005 Isopropylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-007 Naphthalene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-008 n-Butylbenezene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-009 n-Propylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-010 o-Xylene	<0.0005	mg/L		08/04/2020	Joanna Yan	•
VOC-011 p-Isopropyltoluene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-013 sec-Butylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-014 Styrene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-015 tert-Butylbenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-016 Toluene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-017 Total p,m Xylene, Ethylbenze	ne<0.0015	mg/L		08/04/2020	Joanna Yan	-
VOC-018 1,1,1,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-019 1,1,1-Trichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-020 1,1,2,2-Tetrachloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-021 1,1,2-Trichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-022 1,1-Dichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-026 1,2-Dibromo-3-chloropropane	< 0.001	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-032 Allyl chloride	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-033 Bromochloromethane	<0.0012	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-034 Bromomethane	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-035 Carbon tetrachloride	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-036 Chloroethane	<0.001	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-037 Chloromethane	<0.006	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-040 Dibromomethane	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		08/04/2020	Joanna Yan	-
VOC-042 Dichloromethane	<0.005	mg/L		08/04/2020	Joanna Yan	-
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		08/04/2020	Joanna Yan	-
VOC-044 Tetrachloroethene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-046 trans-1,3-Dichloropropene	< 0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-047 Trichloroethene	<0.0005	mg/L		08/04/2020	Joanna Yan	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-049 Vinyl Chloride	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-050 1,2,3- Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
	NU0000	mg/∟		00/04/2020		9111-



Sample 20/17363	Site -17 Levin D3r /9237-0 Levin Landfill Sample		Map Ref.	Date Sampled 01/04/2020 00:00		eceived 2020 14:28	Order No. 0
10100.17	Test	Result	Units		Test Date	Signatory	
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	a KTP
	1,3-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
	1,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
	2-Chlorotoluene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-056	4-Chlorotoluene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-057	Bromobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-058	Chlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-061	Carbon disulphide	<0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-062	Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-063	Bromoform	< 0.0005	mg/L		08/04/2020	Joanna Yan	g KTP
VOC-064	Chloroform	< 0.0005	mg/L		08/04/2020	Joanna Yan	-
VOC-065	Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Joanna Yan	-
Sample 20/17363			Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order No. 0
NOLES. 17	'9238-0 Levin Landfill Sample	Decult	Unite		Test Date	Cignotom	
0004	Test	Result	Units		Test Date	Signatory	
0001	pH Sugnandad Calida Tatal	7.1	- /3		08/04/2020	Marylou Cat	
0002	Suspended Solids - Total	< 5	g/m³		08/04/2020	Jennifer Mor	
0040	Total (NP) Organic Carbon	1.0	g/m³		10/04/2020	Sharon van	
0052	Alkalinity - Total	73	g CaCO3/m³		08/04/2020	Marylou Cat	
0055	Conductivity at 25°C	37.2	mS/m		08/04/2020	Marylou Cat	
0081	Chemical Oxygen Demand	< 15	g/m³		09/04/2020	Gordon McA	
0180	BOD5 - Soluble Carbonaceous		g/m³		09/04/2020	Marylou Cat	
0602	Chloride	19.8	g/m³		09/04/2020 09/04/2020	Amit Kumar	
0605 0607	Nitrate - Nitrogen	16.9 4.34	g/m³		09/04/2020	Amit Kumar Amit Kumar	
0760	Sulphate Ammonia Nitrogen	4.34 < 0.01	g/m³		11/04/2020	Athena Cao	NIF
1642	Total Hardness	< 0.01 95	g/m³ g CaCO3/m³		11/04/2020	Shuyu Zhao	עדט
		95 18.0				-	
1810 1819	Calcium - Dissolved Iron - Dissolved	< 0.005	g/m³		11/04/2020 11/04/2020	Shuyu Zhao	
		< 0.005 12.3	g/m³		11/04/2020	Shuyu Zhao	
1822	Magnesium - Dissolved Sodium - Dissolved		g/m³			Shuyu Zhao Shuyu Zhao	
1834 2088		33.9	g/m³		11/04/2020 11/04/2020	Athena Cao	KIP
2000 6701	Dissolved Reactive Phosphorus Aluminium - Dissolved	0.003	g/m³ g/m³		09/04/2020	Sharon van	Soost KTD
6703	Arsenic - Dissolved	0.003	-		09/04/2020	Sharon van	
			g/m³				
6707 6708	Boron - Dissolved Cadmium - Dissolved	0.05 < 0.0002	g/m³		09/04/2020 09/04/2020	Sharon van Sharon van	
6711	Chromium - Dissolved	< 0.0002	g/m³		09/04/2020	Sharon van	
6713		0.0057	g/m³		09/04/2020	Sharon van	
6718	Copper - Dissolved Lead - Dissolved	< 0.0005	g/m³ g/m³		09/04/2020	Sharon van	
6721	Manganese - Dissolved	0.0009	g/m³		09/04/2020	Sharon van	
	-	< 0.0005	-				
6722 6724	Mercury - Dissolved Nickel - Dissolved	< 0.0005	g/m³		09/04/2020 09/04/2020	Sharon van Sharon van Sharon van S	
6724 6726	Nickel - Dissolved Potassium - Dissolved	< 0.0005 8.16	g/m³		09/04/2020	Sharon van	
6726 6738	Zinc - Dissolved	0.004	g/m³		09/04/2020	Sharon van	
6738 M0104		0.004 240	g/m³ cfu/100mL		09/04/2020	Yuemei Yu ł	
		240 < 5			00/04/2020		
	Volatile Fatty Acids		g/m³				Transcribed by
	Total Halogenated Phenolics	< 0.05 Completed	g/m³		08/04/2020	Freddie Bad	Transcribed by
	Sample Filtration I 2,3-Diuron	Completed <0.001	mall		08/04/2020		
3000-001	1 2, 5- DIUI011	NU.UU I	mg/L		08/04/2020	Joanna Yan	Y N I F



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

Page 46 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample Site 20/17363-18 Lev Notes: 179238-0 Levin Lan	vin D6	Map Ref.	Date Sampled 07/04/2020 00:00		Received 2020 09:41	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-002 a-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	a KTP
SVOC-003 a-chlordane	<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-004 Aldrin	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-005 b-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-006 cis-Permethrin	<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-007 Dieldrin	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-008 Endosulfan II	< 0.005	mg/L		08/04/2020	Joanna Yang	-
SVOC-009 Endosulfan Sulfa		mg/L		08/04/2020	Joanna Yan	
SVOC-010 Endrin	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-011 Endrin Aldehyde	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-012 Endrin Ketone	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-013 Gamma-Chlorda		mg/L		08/04/2020	Joanna Yan	-
SVOC-014 Heptachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-015 Heptachlor Epox		mg/L		08/04/2020	Joanna Yan	-
SVOC-016 Hexachlorobenze		mg/L		08/04/2020	Joanna Yan	-
SVOC-017 Lindane (g-BHC		mg/L		08/04/2020	Joanna Yan	-
SVOC-018 Methoxychlor	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-019 p,p'-DDD	<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-020 p,p'DDE	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-021 p,p'-DDT	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-022 Procymidone	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-023 Propanil	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-024 Endosulfan I	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-025 Alachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-027 Atrazine	<0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-028 Bromacil	<0.005	mg/L		08/04/2020	Joanna Yan	-
SVOC-029 Carbofuran	<0.001	mg/L		08/04/2020	Joanna Yan	-
SVOC-030 Cyanazine	<0.005	mg/L		08/04/2020	Joanna Yan	-
SVOC-031 d-BHC	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-033 Metolachlor	<0.0001	mg/L		08/04/2020	Joanna Yan	
SVOC-034 Metribuzin	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-035 Molinate	<0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-038 Pendimethalin	<0.002	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-039 Propazine	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-041 Simazine	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-042 Terbuthylazine	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-043 Trifluralin	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-044 Hexazinone	<0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-046 Diazinon	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-047 Dimethoate	<0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-048 Pirimiphos methy	/l <0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-049 Acenapthene	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-051 Anthracene	< 0.0010	mg/L		08/04/2020	Joanna Yan	-
SVOC-052 benz(a)anthrace	ne < 0.0001	mg/L		08/04/2020	Joanna Yan	-
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		08/04/2020	Joanna Yan	g KTP
SVOC-054 Total Benzo(b) a	nd Benzo(k) < 0.0010	mg/L		08/04/2020	Joanna Yang	g KTP
fluoranthrene						



Sample 20/17363-18 Notes: 179238-0 L	Site Levin D6 evin Landfill Sample		Map Ref.	Date Sampled 07/04/2020 00:00		eceived 2020 09:41	Order 0
Test		Result	Units		Test Date	Signatory	
SVOC-055 Benzo(g	,h,i)perylene	<0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-057 Chrysen	e	< 0.0001	mg/L		08/04/2020	Joanna Yang	J KTP
SVOC-058 Dibenz(a	a,h)anthracene	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-059 Fluorant	hene	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-060 Fluorene	e	< 0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-061 Indeno(2	1,2,3-cd)pyrene	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-062 Naphtha	llene	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-063 Phenant	hrene	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-064 Pyrene		<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-066 2,2',3,4,4	4',5'-Hexachlorobipher	ny≮0.001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-067 2,2',4,5,	5'-Pentachlorobipheny	/l <0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-068 2,4,4'-Tr	ichlorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-0692,4-Dich	lorobiphenyl	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-070 2,2',3,4,4	4',5',6-Heptachlorobipl	heng/10001	mg/L		08/04/2020	Joanna Yang	g KTP
SVOC-072 Bis(2-eth	nylhexyl)adipate	<0.0001	mg/L		08/04/2020	Joanna Yang	g KTP
VOC-001 1,2,4-Tri	imethylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-002 1,3,5-Tri	imethylbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-003 Benzene	e	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-005 Isopropy	lbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-007 Naphtha	llene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-008 n-Butylb	enezene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-009 n-Propyl	benzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-010 o-Xylene	e	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-011 p-Isopro	pyltoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-013 sec-Buty	lbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-014 Styrene		<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-015 tert-Buty	lbenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-016 Toluene		<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-017 Total p,r	n Xylene, Ethylbenzer	ne<0.0015	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-018 1,1,1,2-7	Tetrachloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-019 1,1,1-Tri	chloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-020 1,1,2,2-1	Tetrachloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-021 1,1,2-Tri	chloroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-022 1,1-Dich	loroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-023 1,1-Dich	loroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-024 1,1-Dich	loropropene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	,
VOC-025 1,2,3-Tri	chloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-026 1,2-Dibr	omo-3-chloropropane	<0.001	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-027 1,2-Dibr		<0.0002	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-028 1,2-Dich	loroethane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-029 1,2-Dich	loropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-030 1,3-Dich	loropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-031 2,2-Dich	loropropane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-032 Allyl chlo	oride	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-033 Bromoch	nloromethane	<0.0012	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-034 Bromom		<0.001	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-035 Carbon	tetrachloride	<0.0005	mg/L		08/04/2020	Dr Alan Stan	
VOC-036 Chloroet		<0.001	mg/L		08/04/2020	Dr Alan Stan	
VOC-037 Chlorom	lethane	<0.006	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-038 cis-1,2-E	Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-039 cis-1,3-E	Dichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-040 Dibromo	methane	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP



Order No. 0

Sample Site 20/17363-18 Levin D6		Map Ref.	Date Sampled 07/04/2020 00:00		eceived Order N 2020 09:41 0
Notes: 179238-0 Levin Landfill Sample	9		0110 112020 00.00		
Test	Result	Units		Test Date	Signatory
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-042 Dichloromethane	< 0.010	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-044 Tetrachloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-047 Trichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-055 2-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-056 4-Chlorotoluene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-057 Bromobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-058 Chlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-061 Carbon disulphide	<0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-062 Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-063 Bromoform	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-064 Chloroform	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
VOC-065 Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Stanley KTP
Sample Site		Map Ref.	Date Sampled	Date R	eceived Order N

20/17363-19 Levin G1S 02/04/2020 00:00 02/04/2020 16:13 0 Notes: 179239-0 Levin Landfill Sample Units Test Date Test Result Signatory pН 02/04/2020 Gordon McArthur KTP 0001 6.9 0002 Suspended Solids - Total < 5 02/04/2020 Gordon McArthur KTP g/m³ Total (NP) Organic Carbon 0040 38.4 g/m³ 04/04/2020 Amit Kumar KTP g CaCO3/m³ 0052 Alkalinity - Total 02/04/2020 Gordon McArthur KTP 58 02/04/2020 0055 Conductivity at 25°C 65.9 mS/m Gordon McArthur KTP 0081 Chemical Oxygen Demand 99 g/m³ 03/04/2020 Gordon McArthur KTP 02/04/2020 0180 BOD5 - Soluble Carbonaceous < 1 g/m³ Marylou Cabral KTP Chloride 0602 130 03/04/2020 Amit Kumar KTP g/m³ 0605 Nitrate - Nitrogen 0.06 g/m³ 03/04/2020 Amit Kumar KTP 0607 33.8 03/04/2020 Amit Kumar KTP Sulphate g/m³ Ammonia Nitrogen g/m³ 0760 0.04 04/04/2020 Divina Lagazon KTP g CaCO3/m³ 1642 **Total Hardness** 59 03/04/2020 Amit Kumar KTP Calcium - Dissolved Amit Kumar KTP 1810 11.1 g/m³ 03/04/2020 g/m³ 1819 Iron - Dissolved 3.49 03/04/2020 Amit Kumar KTP 7.61 03/04/2020 Amit Kumar KTP 1822 Magnesium - Dissolved g/m³ 1834 Sodium - Dissolved 94.2 g/m³ 03/04/2020 Amit Kumar KTP Dissolved Reactive Phosphorus0.038 2088 g/m³ 04/04/2020 Divina Lagazon KTP 03/04/2020 6701 Aluminium - Dissolved 0.137 g/m³ Shanel Kumar KTP 6703 Arsenic - Dissolved 0.002 g/m³ 03/04/2020 Shanel Kumar KTP 6707 < 0.03 03/04/2020 Shanel Kumar KTP Boron - Dissolved g/m³ < 0.0002 03/04/2020 6708 Cadmium - Dissolved g/m³ Shanel Kumar KTP 6711 Chromium - Dissolved 0.001 g/m³ 03/04/2020 Shanel Kumar KTP



Copper - Dissolved

6713

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

0.0086

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

g/m³

03/04/2020

Shanel Kumar KTP

Sample 20/17363			Map Ref.	Date Sampled 02/04/2020 00:00	Date Received 02/04/2020 16:13		Order No. 0
Notes: 17	79239-0 Levin Landfill Sample	Desuit	1114-			Olar - t	
0740	Test	Result	Units		Test Date	Signatory	
6718	Lead - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kuma	
6721	Manganese - Dissolved	0.0635	g/m³		03/04/2020	Shanel Kuma	
6722	Mercury - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kuma	
6724	Nickel - Dissolved	0.0016	g/m³		03/04/2020	Shanel Kuma	
6726	Potassium - Dissolved	5.93	g/m³		03/04/2020	Shanel Kuma	
6738	Zinc - Dissolved	0.003	g/m³		03/04/2020	Shanel Kuma	
M0104	E. coli	16	cfu/100mL		02/04/2020	Yuemei Yu K	
MO-5001	Volatile Fatty Acids	< 5	g/m³			Prashilla Sing	gh Transcribed
						by	
MO-5002	2 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sing	gh Transcribed
P1859	Sample Filtration	Completed			03/04/2020	Robyn Madg	a
	12,3-Diuron	<0.001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-002	•	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
	3 a-chlordane	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-004		<0.001	mg/L		03/04/2020	Dr Alan Stan	5
SVOC-00		<0.001	-		03/04/2020	Dr Alan Stan	-
	6 cis-Permethrin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	5
SVOC-00		<0.0001	mg/L		03/04/2020		5
	8 Endosulfan II		mg/L			Dr Alan Stan	-
		< 0.005	mg/L		03/04/2020	Dr Alan Stan	•
	9 Endosulfan Sulfate	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-01		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	1 Endrin Aldehyde	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
	2 Endrin Ketone	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	3 Gamma-Chlordane	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
	4 Heptachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	5 Heptachlor Epoxide	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	6 Hexachlorobenzene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	7 Lindane (g-BHC)	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-01	8 Methoxychlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
	9 p,p'-DDD	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-02	0 p,p'DDE	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	1 p,p'-DDT	<0.001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-022	2 Procymidone	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	3 Propanil	<0.001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-024	4 Endosulfan I	<0.001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	5 Alachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	6 Aldicarb	<0.1	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	7 Atrazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	8 Bromacil	<0.005	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-02	9 Carbofuran	<0.001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	0 Cyanazine	<0.005	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	1 d-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	2 Metalaxyl-M	<0.001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	3 Metolachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-034	4 Metribuzin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	5 Molinate	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	7 Oxadiazon	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ey KTP
SVOC-03	8 Pendimethalin	<0.002	mg/L		03/04/2020	Dr Alan Stan	ey KTP
	9 Propazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	0 Pyriproxyfen	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	1 Simazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
			··• - -				, .



Sample 20/17363-19 Notes: 179239-0 L	Site Levin G1S .evin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order 3 0
Test		Result	Units		Test Date	Signatory	
SVOC-042 Terbuth	ylazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-043 Triflurali	n	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-044 Hexazin	ione	<0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-045 Chlorpy	rifos	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-046 Diazinor	า	<0.0001	mg/L		03/04/2020	Dr Alan Stan	lley KTP
SVOC-047 Dimetho	pate	<0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-048 Pirimiph	ios methyl	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-049 Acenap	thene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-050 Acenap	hthylene	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-051 Anthrac	ene	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-052 benz(a)	anthracene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-053 Benzo(a	a)pyrene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-054 Total Be fluorantl	enzo(b) and Benzo(k) hrene	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-055 Benzo(g	g,h,i)perylene	<0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-057 Chryser		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-058 Dibenz(a,h)anthracene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-059 Fluoran	thene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-060 Fluoren	e	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-061 Indeno(1,2,3-cd)pyrene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-062 Naphtha	alene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-063 Phenan	threne	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-064 Pyrene		<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-066 2,2',3,4,	4',5'-Hexachlorobiphe	nyk0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-067 2,2',4,5,	5'-Pentachlorobiphen	yl <0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-068 2,4,4'-T	richlorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-0692,4-Dict	nlorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-070 2,2',3,4,	4',5',6-Heptachlorobip	he n 0/10001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-072 Bis(2-et	hylhexyl)adipate	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
VOC-001 1,2,4-Tr	imethylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-002 1,3,5-Tr	imethylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-003 Benzen	е	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-005 Isoprop	ylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-007 Naphtha	alene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-008 n-Butylb	enezene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-009 n-Propy	lbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-010 o-Xylen	е	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-011 p-lsopro	pyltoluene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-013 sec-But	ylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-014 Styrene		<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-015 tert-Buty	lbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-016 Toluene	•	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-017 Total p,	m Xylene, Ethylbenze	ne<0.0015	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-018 1,1,1,2-	Tetrachloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-019 1,1,1-Tr	ichloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-020 1,1,2,2-	Tetrachloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-021 1,1,2-Tr	ichloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-022 1,1-Dich	nloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-023 1,1-Dich	nloroethene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-024 1,1-Dich	nloropropene	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
VOC-025 1,2,3-Tr	ichloropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
	omo-3-chloropropane	<0.001	mg/L		03/04/2020	Joanna Yang	n KTP



Page 51 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Order No. 0

Sample 20/17363-19	Site Levin G1S		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order No. 0
Notes: 179239-0 L	evin Landfill Sample	•					
Test		Result	Units		Test Date	Signatory	
VOC-027 1,2-Dibr	omoethane	<0.0002	mg/L		03/04/2020	Joanna Yang	KTP
VOC-028 1,2-Dich	loroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-029 1,2-Dich	loropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-030 1,3-Dich	loropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-031 2,2-Dich	loropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-032 Allyl chlo	oride	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-033 Bromocl	hloromethane	<0.0012	mg/L		03/04/2020	Joanna Yang	KTP
VOC-034 Bromom	nethane	<0.001	mg/L		03/04/2020	Joanna Yang	KTP
VOC-035 Carbon	tetrachloride	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-036 Chloroet	thane	<0.001	mg/L		03/04/2020	Joanna Yang	KTP
VOC-037 Chlorom	nethane	<0.006	mg/L		03/04/2020	Joanna Yang	KTP
VOC-038 cis-1,2-E	Dichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-039 cis-1,3-E	Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-040 Dibromo	omethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-041 Dichloro	difluoromethane	<0.001	mg/L		03/04/2020	Joanna Yang	KTP
VOC-042 Dichloro	methane	<0.005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-043 Hexachl	orobutadiene	<0.0002	mg/L		03/04/2020	Joanna Yang	KTP
VOC-044 Tetrachl	oroethene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-045 trans-1,2	2-Dichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-046 trans-1,3	3-Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-047 Trichlord	bethene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-048 Trichlord	ofluoromethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-049 Vinyl Ch	lloride	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-050 1,2,3-Tri	ichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-051 1,2,4-Tri	ichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-052 1,2-Dich	llorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-053 1,3-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-054 1,4-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-055 2-Chloro	otoluene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-056 4-Chloro	otoluene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-057 Bromob	enzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-058 Chlorob	enzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-059 1,3,5-Tri	ichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-060 4-Methy	I-2-Pentanone	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-061 Carbon	disulphide	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-062 Bromodi	ichloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-063 Bromofo	orm	< 0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-064 Chlorofc	orm	< 0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-065 Dibromo	ochloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang	KTP
Sample 20/17363-20 Notes: 179240-0 L	Site Levin G2s evin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order No. 0
						.	

	Test	Result
0001	рН	7.0
0002	Suspended Solids - Total	8
0040	Total (NP) Organic Carbon	15.6
0052	Alkalinity - Total	427
0055	Conductivity at 25°C	190
0081	Chemical Oxygen Demand	53
0180	BOD5 - Soluble Carbonaceous	< 1
0602	Chloride	323
0605	Nitrate - Nitrogen	< 0.01



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

Units

g/m³

g/m³

mS/m

g/m³

g/m³

g/m³

g/m³

g CaCO3/m³

Test Date

02/04/2020

02/04/2020

04/04/2020

02/04/2020

02/04/2020

03/04/2020

02/04/2020

03/04/2020

03/04/2020

Signatory

Gordon McArthur KTP

Marylou Cabral KTP

Amit Kumar KTP

Amit Kumar KTP

Amit Kumar KTP

Sample 20/17363			Map Ref.	Date Sampled 02/04/2020 00:00		Order No. 2020 16:13 0
NOLES. 1	79240-0 Levin Landfill Sample		Unite		Test Date	Signatory
0607	Test	Result	Units		Test Date 03/04/2020	Signatory
0607	Sulphate	5.86	g/m³			Amit Kumar KTP
0760	Ammonia Nitrogen	0.02	g/m³		04/04/2020	Divina Lagazon KTP
1642	Total Hardness	304	g CaCO3/m³		03/04/2020	Amit Kumar KTP
1810	Calcium - Dissolved	61.0	g/m³		03/04/2020	Amit Kumar KTP
1819	Iron - Dissolved	0.032	g/m³		03/04/2020	Amit Kumar KTP
1822 1834	Magnesium - Dissolved Sodium - Dissolved	36.8 272	g/m³		03/04/2020 03/04/2020	Amit Kumar KTP Amit Kumar KTP
2088			g/m³		03/04/2020	
	Dissolved Reactive Phospho		g/m³			Divina Lagazon KTP Shanel Kumar KTP
6701	Aluminium - Dissolved	0.003	g/m³		03/04/2020	
6703	Arsenic - Dissolved	< 0.001	g/m³		03/04/2020	Shanel Kumar KTP
6707	Boron - Dissolved	1.21	g/m³		03/04/2020	Shanel Kumar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		03/04/2020	Shanel Kumar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		03/04/2020	Shanel Kumar KTP
6713	Copper - Dissolved	0.0010	g/m³		03/04/2020	Shanel Kumar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kumar KTP
6721	Manganese - Dissolved	0.215	g/m³		03/04/2020	Shanel Kumar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kumar KTP
6724	Nickel - Dissolved	0.0046	g/m³		03/04/2020	Shanel Kumar KTP
6726	Potassium - Dissolved	25.5	g/m³		03/04/2020	Shanel Kumar KTP
6738	Zinc - Dissolved	0.006	g/m³		03/04/2020	Shanel Kumar KTP
M0104	E. coli	< 4	cfu/100mL		02/04/2020	Juana Tamayo KTP
MO-5001	Volatile Fatty Acids	< 5	g/m³			Prashilla Singh Transcribed
MO-5002	2 Total Halogenated Phenolics	s < 0.05	g/m³			by Prashilla Singh Transcribed by
P1859	Sample Filtration	Completed			03/04/2020	Robyn Madge .
	1 2,3-Diuron	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00	,	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	3 a-chlordane	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00		<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00		<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	6 cis-Permethrin	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00		<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	8 Endosulfan II	<0.005	mg/L		03/04/2020	Dr Alan Stanley KTP
	9 Endosulfan Sulfate	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC-00		<0.0001			03/04/2020	Dr Alan Stanley KTP
	1 Endrin Aldehyde	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
	2 Endrin Ketone	<0.001	mg/L		03/04/2020	-
	3 Gamma-Chlordane	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP Dr Alan Stanley KTP
			mg/L			•
	4 Heptachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	5 Heptachlor Epoxide	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	6 Hexachlorobenzene	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	7 Lindane (g-BHC)	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	8 Methoxychlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	9 p,p'-DDD	< 0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	0 p,p'DDE	< 0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	1 p,p'-DDT	< 0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
	2 Procymidone	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
	3 Propanil	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
	4 Endosulfan I	<0.001	mg/L		03/04/2020	Dr Alan Stanley KTP
	5 Alachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanley KTP
SVOC 02	6 Aldicarb	<01	ma/l		03/04/2020	Dr Alan Stanlov KTP



SVOC-026 Aldicarb

<0.1

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

mg/L

Page 53 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

03/04/2020 Dr Alan Stanley KTP

Sample 20/17363-20	Site Levin G2s evin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
Test		Result	Units		Test Date	Signatory	
SVOC-027 Atrazine		<0.0001	mg/L		03/04/2020	Dr Alan Stan	lov KTP
SVOC-027 Atrazine SVOC-028 Bromaci		<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-029 Carbofu		<0.003	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-029 Carborul SVOC-030 Cyanazii		<0.001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-030 Cyallazii SVOC-031 d-BHC		<0.000	- 		03/04/2020	Dr Alan Stan	
SVOC-032 Metalaxy	/I_N/	<0.0001	mg/L mg/L		03/04/2020	Dr Alan Stan	-
SVOC-032 Metalaxy		<0.001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-034 Metribuz		<0.0001	mg/L		03/04/2020	Dr Alan Stan	,
SVOC-035 Molinate		<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-037 Oxadiaz		<0.0001	- 		03/04/2020	Dr Alan Stan	•
SVOC-037 Oxadiaz		<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
			mg/L		03/04/2020	Dr Alan Stan	-
SVOC-039 Propazir		<0.0001 <0.0001	mg/L		03/04/2020	Dr Alan Stan Dr Alan Stan	,
SVOC-040 Pyriprox	-		mg/L				
SVOC-041 Simazine		<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-042 Terbuthy		<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-043 Triflurali		<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-044 Hexazine		< 0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-045 Chlorpyr		<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-046 Diazinon		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-047 Dimetho		< 0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-048 Pirimipho	-	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-049 Acenapt		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-050 Acenaph	-	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-051 Anthrace		< 0.0010	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-052 benz(a)a		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-053 Benzo(a		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	nzo(b) and Benzo(k)	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	IEY KIP
fluoranth		-0.001			02/04/2020		
SVOC-055 Benzo(g		< 0.001	mg/L		03/04/2020 03/04/2020	Dr Alan Stan	•
SVOC-057 Chrysen		< 0.0001	mg/L			Dr Alan Stan	
SVOC-058 Dibenz(a	,	< 0.0001	mg/L		03/04/2020	Dr Alan Stan Dr Alan Stan	•
SVOC-059 Fluorant		< 0.0001	mg/L		03/04/2020		5
SVOC-060 Fluorene		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	,
SVOC-061 Indeno(1	, , , , , , , , , , , , , , , , , , ,	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-062 Naphtha		<0.0001	mg/L		03/04/2020 03/04/2020	Dr Alan Stan	-
SVOC-063 Phenant	niene	<0.0001	mg/L			Dr Alan Stan	•
SVOC-064 Pyrene	1' E' Llovooblorobinhon	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	4',5'-Hexachlorobiphen	-	mg/L		03/04/2020	Dr Alan Stan	-
	5'-Pentachlorobiphenyl		mg/L		03/04/2020	Dr Alan Stan	-
SVOC-068 2,4,4'-Tr		<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-069 2,4-Dich		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	4',5',6-Heptachlorobiph	-	mg/L		03/04/2020	Dr Alan Stan	5
SVOC-072 Bis(2-eth		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
VOC-001 1,2,4-Tri	•	<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-002 1,3,5-Tri	•	<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-003 Benzene		<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-005 Isopropy		<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-007 Naphtha		<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-008 n-Butylb		<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-009 n-Propyl		<0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-010 o-Xylene		< 0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-011 p-Isopro	pyitoiuene	<0.0005	mg/L		03/04/2020	Joanna Yang	INIP



Page 54 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-20 Notes: 179240-0 Levin	Site Levin G2s		Map Ref.	Date Sampled 02/04/2020 00:00
Test		Result	Units	
VOC-013 sec-Butylber	nzene	<0.0005	mg/L	
VOC-014 Styrene	lizene	<0.0005	mg/L	
VOC-015 tert-Butylber	22020	<0.0005	mg/L	
VOC-015 Tell-Butylber	izerie	<0.0005	mg/L	
VOC-017 Total p,m Xy	Jona Ethylbonzon		mg/L	
VOC-018 1,1,1,2-Tetra		<0.0015	mg/L	
VOC-019 1,1,1-Trichlo		<0.0005 <0.0005	mg/L	
VOC-020 1,1,2,2-Tetra		<0.0005	mg/L	
		<0.0005	-	
VOC-021 1,1,2-Trichlo			mg/L	
VOC-022 1,1-Dichloro		<0.0005	mg/L	
VOC-023 1,1-Dichloro		< 0.0005	mg/L	
VOC-024 1,1-Dichloro		< 0.0005	mg/L	
VOC-025 1,2,3-Trichlo		< 0.0005	mg/L	
VOC-026 1,2-Dibromo		<0.001	mg/L	
VOC-027 1,2-Dibromo		<0.0002	mg/L	
VOC-028 1,2-Dichloro		<0.0005	mg/L	
VOC-029 1,2-Dichloro		<0.0005	mg/L	
VOC-030 1,3-Dichloro		<0.0005	mg/L	
VOC-031 2,2-Dichloro		<0.0005	mg/L	
VOC-032 Allyl chloride	9	<0.0005	mg/L	
VOC-033 Bromochloro	omethane	<0.0012	mg/L	
VOC-034 Bromometha	ane	<0.001	mg/L	
VOC-035 Carbon tetra	achloride	<0.0005	mg/L	
VOC-036 Chloroethan	e	<0.001	mg/L	
VOC-037 Chlorometha	ane	<0.006	mg/L	
VOC-038 cis-1,2-Dich	loroethene	<0.0005	mg/L	
VOC-039 cis-1,3-Dich	loropropene	<0.0005	mg/L	
VOC-040 Dibromomet	thane	<0.0005	mg/L	
VOC-041 Dichlorodiflu	oromethane	<0.001	mg/L	
VOC-042 Dichloromet	hane	<0.005	mg/L	
VOC-043 Hexachlorot	outadiene	<0.0002	mg/L	
VOC-044 Tetrachloroe	ethene	<0.0005	mg/L	
VOC-045 trans-1,2-Die	chloroethene	<0.0005	mg/L	
VOC-046 trans-1,3-Did	chloropropene	<0.0005	mg/L	
VOC-047 Trichloroeth	ene	<0.0005	mg/L	
VOC-048 Trichlorofluc	promethane	<0.0005	mg/L	
VOC-049 Vinyl Chlorid	de	<0.0005	mg/L	
VOC-050 1,2,3-Trichlo	orobenzene	<0.0005	mg/L	
VOC-051 1,2,4-Trichlo	orobenzene	<0.0005	mg/L	
VOC-052 1,2-Dichloro	benzene	<0.0005	mg/L	
VOC-053 1,3-Dichloro	benzene	<0.0005	mg/L	
VOC-054 1,4-Dichloro	benzene	<0.0005	mg/L	
VOC-055 2-Chlorotolu		<0.0005	mg/L	
VOC-056 4-Chlorotolu	iene	<0.0005	mg/L	
VOC-057 Bromobenze		< 0.0005	mg/L	
VOC-058 Chlorobenze		< 0.0005	mg/L	
VOC-059 1,3,5-Trichlo		<0.0005	mg/L	
VOC-060 4-Methyl-2-F		<0.0005	mg/L	
VOC-061 Carbon disu		<0.0005	mg/L	
VOC-062 Bromodichlo		< 0.0005	mg/L	
VOC-062 Bromodicine VOC-063 Bromoform		< 0.0005	mg/L	
VOC-063 Bromolorm VOC-064 Chloroform			-	
		< 0.0005	mg/L	

Test Date	Signatory
03/04/2020	Joanna Yang KTP

Date Received

02/04/2020 16:13

Order No.

0



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

Sample 20/17363- Notes: 17	Site -20 Levin G2s 9240-0 Levin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
110163. 173	Test	Result	Units		Test Date	Signatory	
VOC-065	Dibromochloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
Sample 20/17363-	Site -21 Levin D5 9241-0 Levin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
Notes. 17	Test	Result	Units		Test Date	Signatory	
0001	рН	7.4			02/04/2020	Gordon McA	rthur KTP
	Suspended Solids - Total	< 5	g/m³		02/04/2020	Gordon McA	
	Total (NP) Organic Carbon	2.0	g/m³		04/04/2020	Amit Kumar	
	Alkalinity - Total	63	g CaCO3/m³		02/04/2020	Gordon McA	rthur KTP
	Conductivity at 25°C	29.9	mS/m		02/04/2020	Gordon McA	rthur KTP
	Chemical Oxygen Demand	< 15	g/m³		03/04/2020	Gordon McA	rthur KTP
	BOD5 - Soluble Carbonaceous	s < 1	g/m³		02/04/2020	Marylou Cat	oral KTP
0602	Chloride	29.1	g/m³		03/04/2020	Amit Kumar	
0605	Nitrate - Nitrogen	1.18	g/m³		03/04/2020	Amit Kumar	KTP
	Sulphate	21.0	g/m³		03/04/2020	Amit Kumar	КТР
	Ammonia Nitrogen	< 0.01	g/m³		04/04/2020	Divina Laga	
	Total Hardness	64	g CaCO3/m³		03/04/2020	Amit Kumar	
1810	Calcium - Dissolved	11.1	g/m³		03/04/2020	Amit Kumar	KTP
1819	Iron - Dissolved	0.070	g/m³		03/04/2020	Amit Kumar	KTP
1822	Magnesium - Dissolved	8.86	g/m³		03/04/2020	Amit Kumar	KTP
1834	Sodium - Dissolved	32.5	g/m³		03/04/2020	Amit Kumar	KTP
2088	Dissolved Reactive Phosphoru	Is0.096	g/m³		04/04/2020	Divina Laga	zon KTP
6701	Aluminium - Dissolved	< 0.002	g/m³		03/04/2020	Shanel Kum	ar KTP
6703	Arsenic - Dissolved	0.001	g/m³		03/04/2020	Shanel Kum	ar KTP
6707	Boron - Dissolved	0.04	g/m³		03/04/2020	Shanel Kum	ar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		03/04/2020	Shanel Kum	ar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		03/04/2020	Shanel Kum	ar KTP
6713	Copper - Dissolved	0.0009	g/m³		03/04/2020	Shanel Kum	ar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kum	ar KTP
6721	Manganese - Dissolved	0.0193	g/m³		03/04/2020	Shanel Kum	ar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kum	ar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kum	ar KTP
6726	Potassium - Dissolved	7.83	g/m³		03/04/2020	Shanel Kum	ar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		03/04/2020	Shanel Kum	ar KTP
M0104	E. coli	< 4	cfu/100mL		02/04/2020	Juana Tama	yo KTP
MO-5001	Volatile Fatty Acids	< 5 *	g/m³			Prashilla Sin	gh Transcribed
						by	
MO-5002	Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sin by	gh Transcribed
P1859	Sample Filtration	Completed			03/04/2020	Robyn Madg	je.
SVOC-001	2,3-Diuron	<0.001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-002	a-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-003	a-chlordane	<0.0001	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-004	Aldrin	<0.001	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-005	b-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-006	cis-Permethrin	<0.0001	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-007	Dieldrin	<0.0001	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-008	Endosulfan II	<0.005	mg/L		03/04/2020	Dr Alan Star	lley KTP
SVOC-009	Endosulfan Sulfate	<0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-010	Endrin	<0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-011	Endrin Aldehyde	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-012	Endrin Ketone	<0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 56 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample Site 20/17363-21 Levin Notes: 179241-0 Levin		Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-013 Gamma-Chlordan		mg/L		03/04/2020	Dr Alan Star	nlev KTP
SVOC-014 Heptachlor	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-015 Heptachlor Epoxid		mg/L		03/04/2020	Dr Alan Star	-
SVOC-016 Hexachlorobenzer		mg/L		03/04/2020	Dr Alan Star	,
SVOC-017 Lindane (g-BHC)	< 0.0001	mg/L		03/04/2020	Dr Alan Star	
SVOC-018 Methoxychlor	<0.0001	mg/L		03/04/2020	Dr Alan Star	
SVOC-019 p,p'-DDD	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-020 p,p'DDE	<0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-021 p,p'-DDT	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-022 Procymidone	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-023 Propanil	<0.001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-024 Endosulfan I	<0.001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-025 Alachlor	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-026 Aldicarb	<0.1	mg/L		03/04/2020	Dr Alan Star	-
SVOC-027 Atrazine	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-028 Bromacil	<0.005	mg/L		03/04/2020	Dr Alan Star	
SVOC-029 Carbofuran	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-029 Carbonaran	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-031 d-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-032 Metalaxyl-M	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-033 Metolachlor	<0.001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-034 Metribuzin	<0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-035 Molinate	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-037 Oxadiazon	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-038 Pendimethalin	<0.002	mg/L		03/04/2020	Dr Alan Star	
SVOC-039 Propazine	< 0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-040 Pyriproxyfen	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-041 Simazine	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-042 Terbuthylazine	<0.0001	mg/L		03/04/2020	Dr Alan Star	
SVOC-043 Trifluralin	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-044 Hexazinone	<0.001	mg/L		03/04/2020	Dr Alan Star	
SVOC-045 Chlorpyrifos	<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-046 Diazinon	<0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-047 Dimethoate	<0.001	mg/L		03/04/2020	Dr Alan Star	
SVOC-048 Pirimiphos methyl	<0.001	mg/L		03/04/2020	Dr Alan Star	
SVOC-049 Acenapthene	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-050 Acenaphthylene	< 0.0010	mg/L		03/04/2020	Dr Alan Star	-
SVOC-051 Anthracene	< 0.0010	mg/L		03/04/2020	Dr Alan Star	-
SVOC-052 benz(a)anthracene		mg/L		03/04/2020	Dr Alan Star	-
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-054 Total Benzo(b) and		mg/L		03/04/2020	Dr Alan Star	-
fluoranthrene		ing/L		03/04/2020	Di Alan Olai	licy it ii
SVOC-055 Benzo(g,h,i)peryle	ne <0.001	mg/L		03/04/2020	Dr Alan Star	
SVOC-057 Chrysene	< 0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-057 Chrysene SVOC-058 Dibenz(a,h)anthra		mg/L		03/04/2020	Dr Alan Star	
SVOC-059 Fluoranthene	< 0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-060 Fluorene	< 0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-061 Indeno(1,2,3-cd)pv		mg/L		03/04/2020	Dr Alan Star	-
SVOC-062 Naphthalene	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-062 Naphthalene	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-063 Phenantinene SVOC-064 Pyrene	<0.0001	mg/L		03/04/2020	Dr Alan Star	•
		-				-
SVOC-066 2,2',3,4,4',5'-Hexa		mg/L		03/04/2020	Dr Alan Star	



SampleSite20/17363-21Levin D5Notes: 179241-0 Levin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order No 0
Test	Result	Units		Test Date	Signatory	
SVOC-067 2,2',4,5,5'-Pentachlorobipheny		mg/L		03/04/2020	Dr Alan Sta	nlev KTP
SVOC-068 2,4,4'-Trichlorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Sta	-
SVOC-069 2,4-Dichlorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Sta	•
SVOC-0092,4-Dichlorobiphenyi SVOC-0702,2',3,4,4',5',6-Heptachlorobiph		mg/L		03/04/2020	Dr Alan Sta	-
SVOC-072 Bis(2-ethylhexyl)adipate	0.0006	mg/L		03/04/2020	Dr Alan Sta	-
VOC-001 1,2,4-Trimethylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-002 1,3,5-Trimethylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-003 Benzene	<0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-005 Isopropylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-007 Naphthalene	<0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-008 n-Butylbenezene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-009 n-Propylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-009 N-Propyidenzene VOC-010 o-Xylene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
		•		03/04/2020	Joanna Yar	-
VOC-011 p-Isopropyltoluene	<0.0005 <0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-013 sec-Butylbenzene VOC-014 Styrene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-014 Styrene VOC-015 tert-Butylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-016 Toluene	<0.0005	mg/L		03/04/2020		-
		mg/L			Joanna Yar	•
VOC-017 Total p,m Xylene, Ethylbenzen		mg/L		03/04/2020	Joanna Yar	•
VOC-018 1,1,1,2-Tetrachloroethane	< 0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-019 1,1,1-Trichloroethane	< 0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-020 1,1,2,2-Tetrachloroethane	< 0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-021 1,1,2-Trichloroethane	< 0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-022 1,1-Dichloroethane	< 0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yar	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		03/04/2020	Joanna Yar	-
VOC-027 1,2-Dibromoethane	< 0.0002	mg/L		03/04/2020	Joanna Yar	-
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		03/04/2020	Joanna Yar	0
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-032 Allyl chloride	<0.0005	mg/L		03/04/2020	Joanna Yar	•
VOC-033 Bromochloromethane	<0.0012	mg/L		03/04/2020	Joanna Yar	-
VOC-034 Bromomethane	<0.001	mg/L		03/04/2020	Joanna Yar	
VOC-035 Carbon tetrachloride	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-036 Chloroethane	<0.001	mg/L		03/04/2020	Joanna Yar	•
VOC-037 Chloromethane	<0.006	mg/L		03/04/2020	Joanna Yar	•
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yar	0
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-040 Dibromomethane	<0.0005	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-042 Dichloromethane	<0.005	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		03/04/2020	Joanna Yar	•
VOC-044 Tetrachloroethene	<0.0005	mg/L		03/04/2020	Joanna Yar	-
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yan	Ig KTP
VOC-047 Trichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		03/04/2020	Joanna Yar	ig KTP
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yar	ng KTP



Sample 20/17363-	Site -21 Levin D5		Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
	9241-0 Levin Landfill Sample			02/04/2020 00:00	02/04/	2020 10.10	Ū
	Test	Result	Units		Test Date	Signatory	
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
/OC-052	1,2-Dichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	
/OC-053	1,3-Dichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	
	1,4-Dichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	·
	2-Chlorotoluene	< 0.0005	mg/L		03/04/2020	Joanna Yang	
	4-Chlorotoluene	<0.0005	mg/L		03/04/2020	Joanna Yang	
	Bromobenzene	< 0.0005	mg/L		03/04/2020	Joanna Yang	
	Chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	
	1,3,5-Trichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	
		<0.0005	-		03/04/2020	-	
	4-Methyl-2-Pentanone		mg/L			Joanna Yang	
	Carbon disulphide	<0.0005	mg/L		03/04/2020	Joanna Yang	
	Bromodichloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang	
	Bromoform	< 0.0005	mg/L		03/04/2020	Joanna Yang	
	Chloroform	< 0.0005	mg/L		03/04/2020	Joanna Yang	·
OC-065	Dibromochloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang	I KTP
Sample 20/17363-			Map Ref.	Date Sampled 02/04/2020 00:00		Received 2020 16:13	Order No. 0
NOLES. 17	'9242-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
0001	рН	7.6			02/04/2020	Gordon McA	
0002	Suspended Solids - Total	< 5	g/m³		02/04/2020	Gordon McA	rthur KTP
0040	Total (NP) Organic Carbon	5.5	g/m³		04/04/2020	Amit Kumar I	<ТР
0052	Alkalinity - Total	131	g CaCO3/m³		02/04/2020	Gordon McA	rthur KTP
0055	Conductivity at 25°C	46.6	mS/m		02/04/2020	Gordon McAr	thur KTP
0081	Chemical Oxygen Demand	16	g/m³		03/04/2020	Gordon McA	rthur KTP
0180	BOD5 - Soluble Carbonaceous	s < 1	g/m³		02/04/2020	Marylou Cab	ral KTP
0602	Chloride	49.4	g/m³		03/04/2020	Amit Kumar I	<тр
0605	Nitrate - Nitrogen	1.01	g/m³		03/04/2020	Amit Kumar I	КТР
0607	Sulphate	5.24	g/m³		03/04/2020	Amit Kumar I	<тр
0760	Ammonia Nitrogen	< 0.01	g/m³		04/04/2020	Divina Lagaz	on KTP
1642	Total Hardness	125	g CaCO3/m³		03/04/2020	Amit Kumar I	
1810	Calcium - Dissolved	18.3	g/m³		03/04/2020	Amit Kumar I	
1819	Iron - Dissolved	< 0.005	g/m³		03/04/2020	Amit Kumar I	
1822	Magnesium - Dissolved	19.2	g/m³		03/04/2020	Amit Kumar I	
1834	Sodium - Dissolved	42.9	g/m³		03/04/2020	Amit Kumar I	
	Dissolved Reactive Phosphoru		-				
			g/m³		04/04/2020	Divina Lagaz	
6701	Aluminium - Dissolved	< 0.002	g/m³		03/04/2020	Shanel Kuma	
	Arsenic - Dissolved	0.002	g/m³		03/04/2020	Shanel Kuma	
6707	Boron - Dissolved	345	g/m³		03/04/2020	Shanel Kuma	
	Cadmium - Dissolved	< 0.0002	g/m³		03/04/2020	Shanel Kuma	
6711	Chromium - Dissolved	< 0.001	g/m³		03/04/2020	Shanel Kuma	
6713	Copper - Dissolved	0.0030	g/m³		03/04/2020	Shanel Kuma	
6718	Lead - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kuma	ar KTP
6721	Manganese - Dissolved	0.0044	g/m³		03/04/2020	Shanel Kuma	ar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kuma	ar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		03/04/2020	Shanel Kuma	ar KTP
6726	Potassium - Dissolved	8.95	g/m³		03/04/2020	Shanel Kuma	ar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		03/04/2020	Shanel Kuma	ar KTP
	E. coli	< 4	cfu/100mL		02/04/2020	Juana Tama	
	Volatile Fatty Acids	< 5 *	g/m³			Prashilla Sing	
		-	J			by	
O-5002	Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sing	gh Transcribe

Wellington 85 Port Road, Seaview Lower Hutt 5045 Phone: (04) 576-5016 Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227

Page 59 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample Site 20/17363-22 Levin F1 Notes: 179242-0 Levin Landfill Sample		Map Ref.	Date Sampled 02/04/2020 00:00	Date Received Order No. 02/04/2020 16:13 0
Test	Result	Units		Test Date Signatory
D1950 Comple Filtration	Completed			by
P1859 Sample Filtration	Completed			03/04/2020 Robyn Madge .
SVOC-001 2,3-Diuron SVOC-002 a-BHC	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-002 a-BHC SVOC-003 a-chlordane	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-003 a-chiordane SVOC-004 Aldrin	<0.0001 <0.001	mg/L		03/04/2020 Dr Alan Stanley KTP 03/04/2020 Dr Alan Stanley KTP
		mg/L		-
SVOC-005 b-BHC	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-006 cis-Permethrin	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-007 Dieldrin	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-008 Endosulfan II	< 0.005	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-009 Endosulfan Sulfate	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-010 Endrin	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-011 Endrin Aldehyde	< 0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-012 Endrin Ketone	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-013 Gamma-Chlordane	< 0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-014 Heptachlor	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-015 Heptachlor Epoxide	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-016 Hexachlorobenzene	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-017 Lindane (g-BHC)	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-018 Methoxychlor	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-019 p,p'-DDD	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-020 p,p'DDE	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-021 p,p'-DDT	< 0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-022 Procymidone	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-023 Propanil	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-024 Endosulfan I	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-025 Alachlor	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-026 Aldicarb	<0.1	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-027 Atrazine	< 0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-028 Bromacil	<0.005	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-029 Carbofuran	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-030 Cyanazine	<0.005	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-031 d-BHC	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-033 Metolachlor	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-034 Metribuzin	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-035 Molinate	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-037 Oxadiazon	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-038 Pendimethalin	<0.002	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-039 Propazine	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-040 Pyriproxyfen	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-041 Simazine	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-042 Terbuthylazine	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-043 Trifluralin	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-044 Hexazinone	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-046 Diazinon	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-047 Dimethoate	<0.001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-048 Pirimiphos methyl	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-049 Acenapthene	<0.0001	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-050 Acenaphthylene	< 0.0010	mg/L		03/04/2020 Dr Alan Stanley KTP
SVOC-051 Anthracene	< 0.0010	mg/L		03/04/2020 Dr Alan Stanley KTP



Page 60 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-22 Notes: 179242-0 Let	Site Levin F1		Map Ref.	Date Sampled 02/04/2020 00:00		eceived 2020 16:13	Order No. 0
Test		Result	Units		Test Date	Signatory	
SVOC-052 benz(a)ar	thracene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	av KTD
SVOC-052 Benzo(a)		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-054 Total Ben		< 0.0010	mg/L		03/04/2020	Dr Alan Stan	-
fluoranthr		< 0.0010	ilig/L		03/04/2020	DI Alah Stah	ey KTF
SVOC-055 Benzo(g,ł	n,i)perylene	<0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-057 Chrysene		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-058 Dibenz(a,	h)anthracene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-059 Fluoranth	ene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-060 Fluorene		< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-061 Indeno(1,	2,3-cd)pyrene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-062 Naphthale	ene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-063 Phenanth	rene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-064 Pyrene		<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-066 2,2',3,4,4'	,5'-Hexachlorobipher	ny≮0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-067 2,2',4,5,5'	-Pentachlorobipheny	/ <0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-068 2,4,4'-Tric	hlorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-069 2,4-Dichlo	robiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-070 2,2',3,4,4'	,5',6-Heptachlorobipl	hen@10001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-072 Bis(2-ethy	(hexyl)adipate	0.0006	mg/L		03/04/2020	Dr Alan Stan	ey KTP
VOC-001 1,2,4-Trim	nethylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-002 1,3,5-Trim	ethylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-003 Benzene		<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-005 Isopropylt	enzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-007 Naphthale	ene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-008 n-Butylbe	nezene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-009 n-Propylb	enzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-010 o-Xylene		<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-011 p-Isoprop	yltoluene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-013 sec-Butyl	benzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-014 Styrene		<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-015 tert-Butylk	enzene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-016 Toluene		<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-017 Total p,m	Xylene, Ethylbenzer	ne<0.0015	mg/L		03/04/2020	Joanna Yang	KTP
VOC-018 1,1,1,2-Te	etrachloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-019 1,1,1-Tric	hloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-020 1,1,2,2-Te	etrachloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-021 1,1,2-Tric	hloroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-022 1,1-Dichlo	oroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-023 1,1-Dichlo	proethene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-024 1,1-Dichlo	ropropene	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-025 1,2,3-Tric	hloropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-026 1,2-Dibror	no-3-chloropropane	<0.001	mg/L		03/04/2020	Joanna Yang	KTP
VOC-027 1,2-Dibror	noethane	<0.0002	mg/L		03/04/2020	Joanna Yang	KTP
VOC-028 1,2-Dichlo	oroethane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-029 1,2-Dichlo	oropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-030 1,3-Dichlo	oropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-031 2,2-Dichlo	oropropane	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-032 Allyl chlor	ide	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
VOC-033 Bromochl	oromethane	<0.0012	mg/L		03/04/2020	Joanna Yang	KTP
VOC-034 Bromome	thane	<0.001	mg/L		03/04/2020	Joanna Yang	KTP
VOC-035 Carbon te	trachloride	<0.0005	mg/L		03/04/2020	Joanna Yang	KTP
	ane	<0.001	mg/L		03/04/2020	Joanna Yang	



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 61 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-			Map Ref.	Date Sampled 02/04/2020 00:00		ReceivedOrder No.2020 16:130
Notes. 178	9242-0 Levin Landfill Sample Test	Result	Units		Test Date	Signatory
	Chloromethane	<0.006	mg/L		03/04/2020	Signatory Joanna Yang KTP
		<0.000	-		03/04/2020	-
	cis-1,2-Dichloroethene		mg/L			Joanna Yang KTP
	cis-1,3-Dichloropropene	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
	Dibromomethane	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
	Dichlorodifluoromethane	<0.001 <0.005	mg/L		03/04/2020	Joanna Yang KTP
	Dichloromethane		mg/L		03/04/2020	Joanna Yang KTP
	Hexachlorobutadiene	< 0.0002	mg/L		03/04/2020	Joanna Yang KTP
	Tetrachloroethene	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
	trans-1,2-Dichloroethene	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
	trans-1,3-Dichloropropene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
	Trichloroethene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
	Trichlorofluoromethane	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-049	Vinyl Chloride	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-050	1,2,3-Trichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-051	1,2,4-Trichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-052	1,2-Dichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-053	1,3-Dichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-054	1,4-Dichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-055	2-Chlorotoluene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-056	4-Chlorotoluene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-057	Bromobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-058	Chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-059	1,3,5-Trichlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-060	4-Methyl-2-Pentanone	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-061	Carbon disulphide	<0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-062	Bromodichloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-063	Bromoform	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-064	Chloroform	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
VOC-065	Dibromochloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang KTP
Sample 20/17363- Notes: 179	Site 23 Levin F2 9243-0 Levin Landfill Sample		Map Ref.	Date Sampled 03/04/2020 00:00		ReceivedOrder No.2020 14:320
	Test	Result	Units		Test Date	Signatory
0001	рН	7.2			03/04/2020	Gordon McArthur KTP
0002	Suspended Solids - Total	< 6	g/m³		03/04/2020	Gordon McArthur KTP
0040	Total (NP) Organic Carbon	1.6	g/m³		04/04/2020	Amit Kumar KTP
0052	Alkalinity - Total	53	g CaCO3/m³		03/04/2020	Gordon McArthur KTP
	Conductivity at 25°C	22.1	mS/m		03/04/2020	Gordon McArthur KTP
	Chemical Oxygen Demand	< 15	g/m³		03/04/2020	Gordon McArthur KTP
	BOD5 - Soluble Carbonaceous		g/m³		03/04/2020	Marylou Cabral KTP
	Chloride	23.2	g/m³		04/04/2020	Shanel Kumar KTP
	Nitrate - Nitrogen	0.33	g/m³		04/04/2020	Shanel Kumar KTP
	Sulphate	8.97	g/m³		04/04/2020	Shanel Kumar KTP
	Ammonia Nitrogen	< 0.01	g/m³		04/04/2020	Divina Lagazon KTP
	Total Hardness	37	g CaCO3/m³		04/04/2020	Shanel Kumar KTP
	Calcium - Dissolved	57 6.01	•		04/04/2020	Shanel Kumar KTP
		0.01 0.018	g/m³			
	Iron - Dissolved		g/m³		04/04/2020	Shanel Kumar KTP
	Magnesium - Dissolved	5.41	g/m³		04/04/2020	Shanel Kumar KTP
	Sodium - Dissolved	26.1	g/m³		04/04/2020	Shanel Kumar KTP
	Dissolved Reactive Phosphorus		g/m³		04/04/2020	Divina Lagazon KTP
	Aluminium - Dissolved	0.002	g/m³		04/04/2020	Shanel Kumar KTP
6703	Arsenic - Dissolved	0.002	g/m³		04/04/2020	Shanel Kumar KTP
N. COM		Wellington	Rolleston	Du	nedin	Page 62



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

Page 62 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363			Map Ref.	Date Sampled 03/04/2020 00:00		eceived 2020 14:32	Order No. 0
Notes: 17	79243-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
6707	Boron - Dissolved	0.03	g/m³		04/04/2020	Shanel Kuma	r KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		04/04/2020	Shanel Kuma	r KTP
6711	Chromium - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kuma	r KTP
6713	Copper - Dissolved	0.0013	g/m³		04/04/2020	Shanel Kuma	r KTP
6718	Lead - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kuma	r KTP
6721	Manganese - Dissolved	0.0360	g/m³		04/04/2020	Shanel Kuma	r KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kuma	r KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kuma	r KTP
6726	Potassium - Dissolved	5.45	g/m³		04/04/2020	Shanel Kuma	r KTP
6738	Zinc - Dissolved	0.002	g/m³		04/04/2020	Shanel Kuma	r KTP
M0104	E. coli	< 4	cfu/100mL		03/04/2020	Juana Tamay	o KTP
MO-5001	Volatile Fatty Acids	< 5 *	g/m³			-	h Transcribed
			5			by	
MO-5002	2 Total Halogenated Phenolics	< 0.05	g/m³			•	h Transcribed
		0100	9			by	,
P1859	Sample Filtration	Completed			04/04/2020	Robyn Madge	2
	12,3-Diuron	<0.001	mg/L		03/04/2020	Dr Alan Stanl	
SVOC-002	•	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	•
	3 a-chlordane	<0.0001			03/04/2020	Dr Alan Stanl	
SVOC-004		<0.001	mg/L		03/04/2020		•
			mg/L			Dr Alan Stanl	•
SVOC-00		< 0.0001	mg/L		03/04/2020	Dr Alan Stanl	•
	6 cis-Permethrin	< 0.0001	mg/L		03/04/2020	Dr Alan Stanl	,
SVOC-007		< 0.0001	mg/L		03/04/2020	Dr Alan Stanl	-
	8 Endosulfan II	< 0.005	mg/L		03/04/2020	Dr Alan Stanl	-
	9 Endosulfan Sulfate	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	•
SVOC-010		<0.0001	mg/L		03/04/2020	Dr Alan Stanl	•
	1 Endrin Aldehyde	<0.001	mg/L		03/04/2020	Dr Alan Stanl	•
	2 Endrin Ketone	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	•
	3 Gamma-Chlordane	<0.001	mg/L		03/04/2020	Dr Alan Stanl	•
SVOC-014	4 Heptachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
	5 Heptachlor Epoxide	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	,
SVOC-016	6 Hexachlorobenzene	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-017	7 Lindane (g-BHC)	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-018	8 Methoxychlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-019	9 p,p'-DDD	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-020	0 p,p'DDE	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
	1 p,p'-DDT	<0.001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-022	2 Procymidone	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-023	3 Propanil	<0.001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-024	4 Endosulfan I	<0.001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-025	5 Alachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-026	6 Aldicarb	<0.1	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-027	7 Atrazine	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-028	8 Bromacil	<0.005	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-029	9 Carbofuran	<0.001	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-030	0 Cyanazine	<0.005	mg/L		03/04/2020	Dr Alan Stanl	ey KTP
SVOC-03		<0.0001	mg/L		03/04/2020	Dr Alan Stanl	-
SVOC-032	2 Metalaxyl-M	<0.001	mg/L		03/04/2020	Dr Alan Stanl	-
	3 Metolachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	-
	4 Metribuzin	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	-
SVOC-03		<0.0001	mg/L		03/04/2020	Dr Alan Stanl	-
	7 Oxadiazon	<0.0001	mg/L		03/04/2020	Dr Alan Stanl	-
2.0000			···· ·				-,



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Page 63 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-23	Site Levin F2		Map Ref.	Date Sampled 03/04/2020 00:00		Received 2020 14:32	Order No. 0
	evin Landfill Sample	Popult	Units		Test Date	Signatory	
Test SVOC-038 Pendime	thelip	Result <0.002			03/04/2020	Signatory Dr Alan Star	
		<0.002	mg/L		03/04/2020		
SVOC-039 Propazir			mg/L			Dr Alan Star	-
SVOC-040 Pyriprox	•	<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-041 Simazine		<0.0001	mg/L		03/04/2020	Dr Alan Star	-
		<0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-043 Triflurali		<0.0001	mg/L		03/04/2020	Dr Alan Star	
SVOC-044 Hexazin		<0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-045 Chlorpyr		<0.0001	mg/L		03/04/2020	Dr Alan Star	
SVOC-046 Diazinon		< 0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-047 Dimetho		< 0.001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-048 Pirimiph	-	< 0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-049 Acenapt		< 0.0001	mg/L		03/04/2020	Dr Alan Star	•
SVOC-050 Acenaph	,	< 0.0010	mg/L		03/04/2020	Dr Alan Star	-
SVOC-051 Anthrace		< 0.0010	mg/L		03/04/2020	Dr Alan Star	•
SVOC-052 benz(a)a		< 0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-053 Benzo(a	,	< 0.0001	mg/L		03/04/2020	Dr Alan Star	-
SVOC-054 Total Be fluoranth	nzo(b) and Benzo(k) nrene	< 0.0010	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-055 Benzo(g	,h,i)perylene	<0.001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-057 Chrysen	e	< 0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-058 Dibenz(a	a,h)anthracene	< 0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-059 Fluorant	hene	< 0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-060 Fluorene	9	< 0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-061 Indeno(1	1,2,3-cd)pyrene	<0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-062 Naphtha	lene	<0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-063 Phenant	hrene	<0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-064 Pyrene		<0.0001	mg/L		03/04/2020	Dr Alan Star	ley KTP
SVOC-066 2,2',3,4,4	4',5'-Hexachlorobiphe	ny≮0.001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-067 2,2',4,5,	5'-Pentachlorobipheny	/l <0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-068 2,4,4'-Tr	ichlorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-0692,4-Dich	lorobiphenyl	<0.0001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-070 2,2',3,4,4	4',5',6-Heptachlorobip	hen@10001	mg/L		03/04/2020	Dr Alan Star	nley KTP
SVOC-072 Bis(2-eth		0.0003	mg/L		03/04/2020	Dr Alan Star	-
VOC-001 1,2,4-Tri	methylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-002 1,3,5-Tri	methylbenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	a KTP
VOC-003 Benzene	9	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-005 Isopropy	lbenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-007 Naphtha		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-008 n-Butylb		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-009 n-Propyl		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-010 o-Xylene		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-011 p-lsopro		< 0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-013 sec-Buty		< 0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-014 Styrene		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-015 tert-Buty	lhenzene	< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-016 Toluene		<0.0005	mg/L		03/04/2020	Joanna Yan	-
	n Xylene, Ethylbenzer		mg/L		03/04/2020	Joanna Yan	-
VOC-018 1,1,1,2-1		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-019 1,1,1-Tri		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-019 1,1,1-111 VOC-020 1,1,2,2-1		<0.0005	mg/L		03/04/2020	Joanna Yan	-
			-				-
VOC-021 1,1,2-Tri		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-022 1,1-Dich	loidethane	<0.0005	mg/L		03/04/2020	Joanna Yan	YNP



Page 64 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample Site 20/17363-23 Levin F2		Map Ref.	Date Sampled 03/04/2020 00:00	Date Received Orde 03/04/2020 14:32 0	er No.
Notes: 179243-0 Levin Landfill Sample					
Test	Result	Units		Test Date Signatory	
VOC-023 1,1-Dichloroethene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-024 1,1-Dichloropropene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-025 1,2,3-Trichloropropane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-026 1,2-Dibromo-3-chloropropane	<0.001	mg/L		03/04/2020 Joanna Yang KTP	
VOC-027 1,2-Dibromoethane	<0.0002	mg/L		03/04/2020 Joanna Yang KTP	
VOC-028 1,2-Dichloroethane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-029 1,2-Dichloropropane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-030 1,3-Dichloropropane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-031 2,2-Dichloropropane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-032 Allyl chloride	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-033 Bromochloromethane	<0.0012	mg/L		03/04/2020 Joanna Yang KTP	
VOC-034 Bromomethane	<0.001	mg/L		03/04/2020 Joanna Yang KTP	
VOC-035 Carbon tetrachloride	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-036 Chloroethane	<0.001	mg/L		03/04/2020 Joanna Yang KTP	
VOC-037 Chloromethane	<0.006	mg/L		03/04/2020 Joanna Yang KTP	
VOC-038 cis-1,2-Dichloroethene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-039 cis-1,3-Dichloropropene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-040 Dibromomethane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-041 Dichlorodifluoromethane	<0.001	mg/L		03/04/2020 Joanna Yang KTP	
VOC-042 Dichloromethane	<0.005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-043 Hexachlorobutadiene	<0.0002	mg/L		03/04/2020 Joanna Yang KTP	
VOC-044 Tetrachloroethene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-045 trans-1,2-Dichloroethene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-046 trans-1,3-Dichloropropene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-047 Trichloroethene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-048 Trichlorofluoromethane	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-049 Vinyl Chloride	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-050 1,2,3-Trichlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-051 1,2,4-Trichlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-052 1,2-Dichlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-053 1,3-Dichlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-054 1,4-Dichlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-055 2-Chlorotoluene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-056 4-Chlorotoluene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-057 Bromobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-058 Chlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-059 1,3,5-Trichlorobenzene	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-060 4-Methyl-2-Pentanone	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-061 Carbon disulphide	<0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-062 Bromodichloromethane	< 0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-063 Bromoform	< 0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-064 Chloroform	< 0.0005	mg/L		03/04/2020 Joanna Yang KTP	
VOC-065 Dibromochloromethane	< 0.0005	mg/L		03/04/2020 Joanna Yang KTP	
SampleSite20/17363-24Levin F3Notes: 179244-0 Levin Landfill Sample		Map Ref.	Date Sampled 03/04/2020 00:00	Date Received Order 03/04/2020 14:32 0	er No.

	Test	Result
0001	рН	7.8
0002	Suspended Solids - Total	< 6
0040	Total (NP) Organic Carbon	1.3
0052	Alkalinity - Total	53
0055	Conductivity at 25°C	19.2



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

Units

g/m³

g/m³

mS/m

g CaCO3/m³

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

Test Date

03/04/2020

03/04/2020

04/04/2020

03/04/2020

03/04/2020

Signatory

Gordon McArthur KTP

Gordon McArthur KTP

Gordon McArthur KTP

Gordon McArthur KTP

Amit Kumar KTP

Page 65 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363	Site 3-24 Levin F3 79244-0 Levin Landfill Sample		Map Ref.	Date Sampled 03/04/2020 00:00		Received 2020 14:32	Order No. 0
10003.17	Test	Result	Units		Test Date	Signatory	
0081	Chemical Oxygen Demand	< 15	g/m³		03/04/2020	Gordon McA	rthur KTP
0180	BOD5 - Soluble Carbonaceous	s < 1	g/m³		03/04/2020	Marylou Cab	oral KTP
0602	Chloride	15.4	g/m³		04/04/2020	Shanel Kum	
0605	Nitrate - Nitrogen	1.11	g/m³		04/04/2020	Shanel Kum	
0607	Sulphate	7.03	g/m³		04/04/2020	Shanel Kum	
0760	Ammonia Nitrogen	< 0.01	g/m³		04/04/2020	Divina Lagaz	
1642	Total Hardness	34	g CaCO3/m³		04/04/2020	Shanel Kum	
1810	Calcium - Dissolved	5.18	g/m³		04/04/2020	Shanel Kum	ar KTP
1819	Iron - Dissolved	< 0.005	g/m³		04/04/2020	Shanel Kum	
1822	Magnesium - Dissolved	5.08	g/m³		04/04/2020	Shanel Kum	
1834	Sodium - Dissolved	23.0	g/m³		04/04/2020	Shanel Kum	
2088	Dissolved Reactive Phosphoru		g/m³		04/04/2020	Divina Lagaz	
6701	Aluminium - Dissolved	< 0.002	g/m³		04/04/2020	Shanel Kum	
6703	Arsenic - Dissolved	0.002	g/m³		04/04/2020	Shanel Kum	
6707	Boron - Dissolved	< 0.03	g/m³		04/04/2020	Shanel Kum	
6708	Cadmium - Dissolved	< 0.0002	g/m³		04/04/2020	Shanel Kum	
6711	Chromium - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kum	
6713	Copper - Dissolved	0.0005	g/m³		04/04/2020	Shanel Kum	
6718	Lead - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
6721	Manganese - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
6722	Manganese - Dissolved Mercury - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
6724	Nickel - Dissolved	< 0.0005	•		04/04/2020	Shanel Kuma	
			g/m³				
6726	Potassium - Dissolved	5.11	g/m³		04/04/2020	Shanel Kum	
6738	Zinc - Dissolved	< 0.002	g/m³ cfu/100mL		04/04/2020	Shanel Kum	
M0104	E. coli	< 4 < 5			03/04/2020	Juana Tama	•
WO-5001	Volatile Fatty Acids	< 5	g/m³				gh Transcribed
MO 5002	2 Total Halogenated Phenolics	< 0.05	a/m ³			by Brashilla Sin	gh Transcribed
10-5002		< 0.05	g/m³			by	gir manscribed
P1859	Sample Filtration	Completed			04/04/2020	Robyn Madg	10
	•		ma/l			Dr Alan Stan	
SVOC-00 SVOC-002	12,3-Diuron	<0.001 <0.0001	mg/L		03/04/2020 03/04/2020	Dr Alan Stan	5
		<0.0001	mg/L				5
	3 a-chlordane		mg/L		03/04/2020	Dr Alan Stan	•
SVOC-004		< 0.001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-00		<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
	6 cis-Permethrin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-00		<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	8 Endosulfan II	< 0.005	mg/L		03/04/2020	Dr Alan Stan	-
	9 Endosulfan Sulfate	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-01		<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
	1 Endrin Aldehyde	<0.001	mg/L		03/04/2020	Dr Alan Stan	5
	2 Endrin Ketone	<0.0001	mg/L		03/04/2020	Dr Alan Stan	5
	3 Gamma-Chlordane	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
	4 Heptachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	5 Heptachlor Epoxide	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
	6 Hexachlorobenzene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	7 Lindane (g-BHC)	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	8 Methoxychlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
	9 p,p'-DDD	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
	0 p,p'DDE	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-02	1 p,p'-DDT	<0.001	mg/L		03/04/2020	Dr Alan Stan	lley KTP

SVOC-021 p,p'-DDT SVOC-022 Procymidone



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

< 0.0001

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

mg/L

Page 66 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

03/04/2020 Dr Alan Stanley KTP

	te evin F3	Map Ref.	Date Sampled 03/04/2020 00:00		Received 2020 14:32	Order No. 0
		Units		Test Data	Cignotom	
Test SVOC-023 Propanil	Result <0.001			Test Date 03/04/2020	Signatory Dr Alan Stan	
SVOC-023 Propanil SVOC-024 Endosulfan I	<0.001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-024 Endosulian 1 SVOC-025 Alachlor	<0.001	mg/L		03/04/2020	Dr Alan Stan	
		mg/L				5
SVOC-026 Aldicarb	<0.1	mg/L		03/04/2020 03/04/2020	Dr Alan Stan	
SVOC-027 Atrazine SVOC-028 Bromacil	<0.0001 <0.005	mg/L		03/04/2020	Dr Alan Stan	-
		mg/L		03/04/2020	Dr Alan Stan	-
SVOC-029 Carbofuran	< 0.001	mg/L			Dr Alan Stan	
SVOC-030 Cyanazine	< 0.005	mg/L		03/04/2020	Dr Alan Stan	
SVOC-031 d-BHC	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-032 Metalaxyl-M	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-033 Metolachlor	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-034 Metribuzin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-035 Molinate	<0.0001	mg/L		03/04/2020	Dr Alan Stan	,
SVOC-037 Oxadiazon	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-038 Pendimethalin	<0.002	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-039 Propazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-040 Pyriproxyfen	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-041 Simazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-042 Terbuthylazine	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-043 Trifluralin	<0.0001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-044 Hexazinone	<0.001	mg/L		03/04/2020	Dr Alan Stan	•
SVOC-045 Chlorpyrifos	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-046 Diazinon	<0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-047 Dimethoate	<0.001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-048 Pirimiphos meth	ıyl <0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-049 Acenapthene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-050 Acenaphthylene	e < 0.0010	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-051 Anthracene	< 0.0010	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-052 benz(a)anthrace	ene < 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-053 Benzo(a)pyrene	e < 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-054 Total Benzo(b) fluoranthrene	and Benzo(k) < 0.0010	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-055 Benzo(g,h,i)per	ylene <0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-057 Chrysene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-058 Dibenz(a,h)anth	nracene < 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-059 Fluoranthene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-060 Fluorene	< 0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-061 Indeno(1,2,3-cd)pyrene <0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-062 Naphthalene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-063 Phenanthrene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-064 Pyrene	<0.0001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-066 2,2',3,4,4',5'-He	xachlorobipheny<0.001	mg/L		03/04/2020	Dr Alan Stan	ley KTP
SVOC-067 2,2',4,5,5'-Penta	achlorobiphenyl <0.0001	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-068 2,4,4'-Trichlorok	oiphenyl <0.0001	mg/L		03/04/2020	Dr Alan Stan	
SVOC-069 2,4-Dichlorobipl		mg/L		03/04/2020	Dr Alan Stan	
SVOC-070 2,2',3,4,4',5',6-H	2	mg/L		03/04/2020	Dr Alan Stan	-
SVOC-072 Bis(2-ethylhexy		mg/L		03/04/2020	Dr Alan Stan	-
VOC-001 1,2,4-Trimethyl	, .	mg/L		03/04/2020	Joanna Yang	-
VOC-002 1,3,5-Trimethyll		mg/L		03/04/2020	Joanna Yang	
VOC-002 1,0,0-mincaryin	< 0.0005	mg/L		03/04/2020	Joanna Yang	
VOC-005 Isopropylbenzel		mg/L		03/04/2020	Joanna Yang	
VOC-003 Isopropyidenzel VOC-007 Naphthalene	<0.0005	-		03/04/2020	Joanna Yang	
	<0.0005	mg/L		03/04/2020	Juanna Tang	JIXIE



Sample 20/17363-24 Notos: 170244.01	Site Levin F3		Map Ref.	Date Sampled 03/04/2020 00:00		eceived 2020 14:32	Order No 0
Test	evin Landfill Sample	Result	Units		Test Date	Signatory	
	0007000	<0.0005			03/04/2020	Joanna Yan	
VOC-008 n-Butylb VOC-009 n-Propyl		<0.0005	mg/L		03/04/2020		-
VOC-009 II-Propyl			mg/L		03/04/2020	Joanna Yan	-
-		<0.0005 <0.0005	mg/L		03/04/2020	Joanna Yan	•
VOC-011 p-Isopro		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-013 sec-Buty VOC-014 Styrene	ibenzene	<0.0005	mg/L		03/04/2020	Joanna Yan Joanna Yan	-
VOC-014 Stylene VOC-015 tert-Buty	lhanzana	<0.0005	mg/L mg/L		03/04/2020	Joanna Yan	-
VOC-015 tert-buty	IDelizerie	<0.0005	mg/L		03/04/2020	Joanna Yan	-
	n Xylene, Ethylbenzen		mg/L		03/04/2020	Joanna Yan	•
VOC-017 10tal p,1 VOC-018 1,1,1,2-1		<0.0005	mg/L		03/04/2020	Joanna Yan	•
		<0.0005	•		03/04/2020		•
VOC-019 1,1,1-Tri			mg/L			Joanna Yan	-
VOC-020 1,1,2,2-7		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-021 1,1,2-Tri		<0.0005	mg/L		03/04/2020	Joanna Yan	•
VOC-022 1,1-Dich		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-023 1,1-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	•
VOC-024 1,1-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-025 1,2,3-Tri		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
	omo-3-chloropropane	< 0.001	mg/L		03/04/2020	Joanna Yan	-
VOC-027 1,2-Dibro		<0.0002	mg/L		03/04/2020	Joanna Yan	-
VOC-028 1,2-Dich		<0.0005	mg/L		03/04/2020	Joanna Yan	•
VOC-029 1,2-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-030 1,3-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-031 2,2-Dich		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-032 Allyl chlo		< 0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-033 Bromoch		< 0.0012	mg/L		03/04/2020	Joanna Yan	•
VOC-034 Bromom		< 0.001	mg/L		03/04/2020	Joanna Yan	-
VOC-035 Carbon 1		<0.0005	mg/L		03/04/2020	Joanna Yan	
VOC-036 Chloroet		<0.001	mg/L		03/04/2020	Joanna Yan	-
VOC-037 Chlorom		<0.006	mg/L		03/04/2020	Joanna Yan	•
VOC-038 cis-1,2-E		<0.0005	mg/L		03/04/2020	Joanna Yan	•
VOC-039 cis-1,3-E		<0.0005	mg/L		03/04/2020	Joanna Yan	0
VOC-040 Dibromo		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-041 Dichloro		<0.001	mg/L		03/04/2020	Joanna Yan	-
VOC-042 Dichloro		<0.005	mg/L		03/04/2020	Joanna Yan	•
VOC-043 Hexachl		<0.0002	mg/L		03/04/2020	Joanna Yan	•
VOC-044 Tetrachl		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-045 trans-1,2		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-046 trans-1,3		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-047 Trichlord		<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-048 Trichlord	ofluoromethane	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-049 Vinyl Ch	loride	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-050 1,2,3-Tri	chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-051 1,2,4-Tri	chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-052 1,2-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-053 1,3-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-054 1,4-Dich	lorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-055 2-Chloro	toluene	<0.0005	mg/L		03/04/2020	Joanna Yan	-
VOC-056 4-Chloro	toluene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-057 Bromobe	enzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-058 Chlorobe	enzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-059 1,3,5-Tri	chlorobenzene	<0.0005	mg/L		03/04/2020	Joanna Yan	g KTP
VOC-060 4-Methy	-2-Pentanone	<0.0005	mg/L		03/04/2020	Joanna Yan	-



Page 68 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-2			Map Ref.	Date Sampled 03/04/2020 00:00		Received 2020 14:32	Order No. 0
Notes: 179	0244-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
	Carbon disulphide	<0.0005	mg/L		03/04/2020	Joanna Yang	0
	Bromodichloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang	-
	Bromoform	< 0.0005	mg/L		03/04/2020	Joanna Yan	-
/OC-064 (Chloroform	< 0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
/OC-065	Dibromochloromethane	< 0.0005	mg/L		03/04/2020	Joanna Yang	g KTP
Sample 20/17363-2			Map Ref.	Date Sampled 03/04/2020 00:00		eceived 2020 14:32	Order No. 0
NOLES. 179	247-0 Levin Landfill Sample	Decult	Units		Test Date	Cignotomy	
0001	Test	Result 7.1	Units		Test Date	Signatory	rthur KTD
	pH		er / ee 3		03/04/2020	Gordon McA	
	Suspended Solids - Total	284	g/m³		03/04/2020	Gordon McA	
	Total (NP) Organic Carbon	23.8	g/m³		04/04/2020	Amit Kumar	
	Alkalinity - Total	151	g CaCO3/m³		03/04/2020	Gordon McA	
	Conductivity at 25°C	55.7	mS/m		03/04/2020	Gordon McA	
	Chemical Oxygen Demand	75	g/m³		03/04/2020	Gordon McA	
	BOD5 - Soluble Carbonaceous		g/m³		03/04/2020	Marylou Cab	
	Chloride	69.3	g/m³		04/04/2020	Shanel Kum	ar KTP
0605 I	Nitrate - Nitrogen	< 0.01	g/m³		04/04/2020	Shanel Kum	ar KTP
0607	Sulphate	6.71	g/m³		04/04/2020	Shanel Kum	ar KTP
0760	Ammonia Nitrogen	4.61	g/m³		04/04/2020	Divina Lagaz	zon KTP
1642	Total Hardness	115	g CaCO3/m³		04/04/2020	Shanel Kum	ar KTP
1810	Calcium - Dissolved	21.1	g/m³		04/04/2020	Shanel Kum	ar KTP
1819	Iron - Dissolved	1.26	g/m³		04/04/2020	Shanel Kum	ar KTP
1822	Magnesium - Dissolved	15.0	g/m³		04/04/2020	Shanel Kum	ar KTP
1834	Sodium - Dissolved	51.3	g/m³		04/04/2020	Shanel Kum	ar KTP
2088	Dissolved Reactive Phosphoru	us0.024	g/m³		04/04/2020	Divina Lagaz	zon KTP
6701	Aluminium - Dissolved	0.009	g/m³		04/04/2020	Shanel Kum	ar KTP
6703	Arsenic - Dissolved	0.001	g/m³		04/04/2020	Shanel Kum	ar KTP
6707	Boron - Dissolved	0.18	g/m³		04/04/2020	Shanel Kum	
	Cadmium - Dissolved	< 0.0002	g/m³		04/04/2020	Shanel Kum	
	Chromium - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kum	
	Copper - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
	Lead - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
	Manganese - Dissolved	0.200	g/m³		04/04/2020	Shanel Kum	
	0		Ū				
	Mercury - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
	Nickel - Dissolved	0.0009	g/m³		04/04/2020	Shanel Kum	
	Potassium - Dissolved	15.5	g/m³		04/04/2020	Shanel Kum	
	Zinc - Dissolved	< 0.002	g/m³		04/04/2020	Shanel Kum	
	E. coli	140	cfu/100mL		03/04/2020	Yuemei Yu k	
10-5001	Volatile Fatty Acids	6	g/m³			Prashilla Sin by	gh Transcribe
/10-5002 .	Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sin	gh Transcribe
P1859	Sample Filtration	Completed			04/04/2020	by Robyn Madg	je.
Sample	Site		Map Ref.	Date Sampled	Date R	eceived	Order No.
20/17363-2		Pond		01/04/2020 00:00	07/04/2	2020 14:28	0
NUIES. 179	249-0 Levin Landfill Sample	Booult	11:40		Test Data	Signature	
0001	Test	Result	Units		Test Date	Signatory	
	рН	7.9			08/04/2020	Marylou Cab	
	Suspended Solids - Total	35	g/m³		08/04/2020	Jennifer Mor	
0040	Total (NP) Organic Carbon Alkalinity - Total	804	g/m³		09/04/2020	Sharon van	Soest KTP
0052		6,750	g CaCO3/m³		09/04/2020		



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

Page 69 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363 Notes: 17	Site S-28 Levin Leachate I 79249-0 Levin Landfill Sample	Pond	Map Ref.	Date Sampled 01/04/2020 00:00		Received Order No. 2020 14:28 0
110165.17	Test	Result	Units		Test Date	Signatory
0055	Conductivity at 25°C	1,610	mS/m		08/04/2020	Marylou Cabral KTP
0081	Chemical Oxygen Demand	2,330	g/m³		09/04/2020	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceou		g/m³		09/04/2020	Marylou Cabral KTP
0602	Chloride	1,210	g/m³		08/04/2020	Amit Kumar KTP
0605	Nitrate - Nitrogen	0.25	g/m³		08/04/2020	Amit Kumar KTP
0607	Sulphate	54.8	g/m³		08/04/2020	Amit Kumar KTP
0760	Ammonia Nitrogen	1,450	g/m³		11/04/2020	Athena Cao
1642	Total Hardness	522	g CaCO3/m³		09/04/2020	Amit Kumar KTP
1810	Calcium - Dissolved	106	g/m³		09/04/2020	Amit Kumar KTP
1819	Iron - Dissolved	5.25	g/m³		09/04/2020	Amit Kumar KTP
1822	Magnesium - Dissolved	62.3	g/m³		09/04/2020	Amit Kumar KTP
1834	Sodium - Dissolved	993	g/m³		09/04/2020	Amit Kumar KTP
2088	Dissolved Reactive Phosphoru	us13.0	g/m³		11/04/2020	Athena Cao
6701	Aluminium - Dissolved	0.586	g/m³		08/04/2020	Sharon van Soest KTP
6703	Arsenic - Dissolved	0.388	g/m³		08/04/2020	Sharon van Soest KTP
6707	Boron - Dissolved	5.69	g/m³		08/04/2020	Sharon van Soest KTP
6708	Cadmium - Dissolved	< 0.0020	g/m³		08/04/2020	Sharon van Soest KTP
6711	Chromium - Dissolved	0.709	g/m³		08/04/2020	Sharon van Soest KTP
6713	Copper - Dissolved	0.0073	g/m³		08/04/2020	Sharon van Soest KTP
6718	Lead - Dissolved	< 0.0050	g/m³		08/04/2020	Sharon van Soest KTP
6721	Manganese - Dissolved	1.04	g/m³		08/04/2020	Sharon van Soest KTP
6722	Mercury - Dissolved	< 0.0050	g/m³		08/04/2020	Sharon van Soest KTP
6724	Nickel - Dissolved	0.125	g/m³		08/04/2020	Sharon van Soest KTP
6726	Potassium - Dissolved	648	g/m³		08/04/2020	Sharon van Soest KTP
6738	Zinc - Dissolved	0.068	g/m³		08/04/2020	Sharon van Soest KTP
M0104	E. coli	24	cfu/100mL		07/04/2020	Yuemei Yu KTP
MO-5001	Volatile Fatty Acids	< 5 *	g/m³			Prashilla Singh Transcribed
						by
MO-5002	Total Halogenated Phenolics	< 0.50	g/m³			Prashilla Singh Transcribed
						by
P1859	Sample Filtration	Completed			08/04/2020	Freddie Badraun .
SVOC-001	12,3-Diuron	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-002	2 a-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-003	3 a-chlordane	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-004	4 Aldrin	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-005	5 b-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-006	6 cis-Permethrin	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-007	7 Dieldrin	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-008	3 Endosulfan II	<0.005	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-009	9 Endosulfan Sulfate	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-010) Endrin	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-011	1 Endrin Aldehyde	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-012	2 Endrin Ketone	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-013	3 Gamma-Chlordane	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-014	4 Heptachlor	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-015	5 Heptachlor Epoxide	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-016	6 Hexachlorobenzene	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-017	7 Lindane (g-BHC)	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-018	3 Methoxychlor	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
3VOC-019	∂p,p'-DDD	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-020) p,p'DDE	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP



SVOC-021 p,p'-DDT

<0.001

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

mg/L

09/04/2020 Dr Alan Stanley KTP

Sample Sit 20/17363-28 Le Notes: 179249-0 Levin Lar	vin Leachate Pond	Map Ref.	Date Sampled 01/04/2020 00:00		Received 2020 14:28	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-022 Procymidone	<0.0001	mg/L		09/04/2020	Dr Alan Stan	lov KTD
SVOC-022 Propanil	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-023 Fropanil SVOC-024 Endosulfan I	<0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-024 Endosulari 1 SVOC-025 Alachlor	<0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-023 Alacilloi SVOC-027 Atrazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-028 Bromacil	<0.005	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-029 Carbofuran	0.030	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-030 Cyanazine	< 0.005	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-031 d-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Stan	
SVOC-032 Metalaxyl-M	<0.001	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-033 Metolachlor	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-034 Metribuzin	0.0004	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-035 Molinate	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-037 Oxadiazon	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-038 Pendimethalin	<0.002	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-039 Propazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-040 Pyriproxyfen	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-041 Simazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-042 Terbuthylazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	
SVOC-043 Trifluralin	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-044 Hexazinone	<0.001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-045 Chlorpyrifos	<0.0001	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-046 Diazinon	0.0005	mg/L		09/04/2020	Dr Alan Stan	
SVOC-047 Dimethoate	<0.001	mg/L		09/04/2020	Dr Alan Stan	
SVOC-048 Pirimiphos meth		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-049 Acenapthene	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-050 Acenaphthylene		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-051 Anthracene	< 0.0010	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-052 benz(a)anthrace		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-053 Benzo(a)pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-054 Total Benzo(b) a fluoranthrene	and Benzo(k) < 0.0010	mg/L		09/04/2020	Dr Alan Stan	ley KTP
SVOC-055 Benzo(g,h,i)pery	/lene <0.001	mg/L		09/04/2020	Dr Alan Stan	lov KTP
SVOC-057 Chrysene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-058 Dibenz(a,h)anth		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-059 Fluoranthene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-060 Fluorene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-061 Indeno(1,2,3-cd)		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-062 Naphthalene	0.0025	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-063 Phenanthrene	< 0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-064 Pyrene	0.0001	mg/L		09/04/2020	Dr Alan Stan	•
SVOC-066 2,2',3,4,4',5'-He>		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-067 2,2',4,5,5'-Penta		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-068 2,4,4'-Trichlorob		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-069 2,4-Dichlorobiph		mg/L		09/04/2020	Dr Alan Stan	
SVOC-070 2,2',3,4,4',5',6-H		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-072 Bis(2-ethylhexyl)		mg/L		09/04/2020	Dr Alan Stan	-
VOC-001 1,2,4-Trimethylb	•	mg/L		08/04/2020	Dr Alan Stan	-
VOC-002 1,3,5-Trimethylb		mg/L		08/04/2020	Dr Alan Stan	-
VOC-002 1,9,9-11inicaryib	0.0025	mg/L		08/04/2020	Dr Alan Stan	-
VOC-005 Isopropylbenzer		mg/L		08/04/2020	Dr Alan Stan	-
				08/04/2020		-
VOC-007 Naphthalene	0.0030	mg/L		00/04/2020	Dr Alan Stan	



•	ite evin Leachate Pond Indfill Sample	Map Ref.	Date Sampled 01/04/2020 00:00		eceived 2020 14:28	Order No. 0
	·	Unito		Test Date	Signatory	
Test VOC-008 n-Butylbenezer	Result ne <0.0005	Units		08/04/2020	Signatory Dr Alan Stan	
		mg/L				-
VOC-009 n-Propylbenzer		mg/L		08/04/2020	Dr Alan Stan	-
VOC-010 o-Xylene	0.0144	mg/L		08/04/2020	Dr Alan Stan	5
VOC-011 p-IsopropyItolue		mg/L		08/04/2020	Dr Alan Stan	5
VOC-013 sec-Butylbenze		mg/L		08/04/2020	Dr Alan Stan	
VOC-014 Styrene	0.0098	mg/L		08/04/2020	Dr Alan Stan	-
VOC-015 tert-Butylbenze		mg/L		08/04/2020	Dr Alan Stan	5
VOC-016 Toluene	0.0052	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-017 Total p,m Xyler	ne, Ethylbenzene <mark>0.0154</mark>	mg/L		08/04/2020	Dr Alan Stan	•
VOC-018 1,1,1,2-Tetrach	loroethane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-019 1,1,1-Trichloroe	ethane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-020 1,1,2,2-Tetrach	loroethane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-021 1,1,2-Trichloroe	ethane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-022 1,1-Dichloroeth	ane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-023 1,1-Dichloroeth	ene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-024 1,1-Dichloropro	pene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-025 1,2,3-Trichlorop	oropane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-026 1,2-Dibromo-3-	chloropropane <0.001	mg/L		08/04/2020	Dr Alan Stan	lev KTP
VOC-027 1,2-Dibromoeth		mg/L		08/04/2020	Dr Alan Stan	lev KTP
VOC-028 1,2-Dichloroeth		mg/L		08/04/2020	Dr Alan Stan	5
VOC-029 1,2-Dichloropro		mg/L		08/04/2020	Dr Alan Stan	-
VOC-030 1,3-Dichloropro		mg/L		08/04/2020	Dr Alan Stan	-
VOC-030 1,3-Dichloropro	•	mg/L		08/04/2020	Dr Alan Stan	5
	<pre>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>></pre>	•		08/04/2020	Dr Alan Stan	5
VOC-032 Allyl chloride		mg/L				-
VOC-033 Bromochlorome		mg/L		08/04/2020	Dr Alan Stan	-
VOC-034 Bromomethane		mg/L		08/04/2020	Dr Alan Stan	-
VOC-035 Carbon tetrach		mg/L		08/04/2020	Dr Alan Stan	•
VOC-036 Chloroethane	<0.001	mg/L		08/04/2020	Dr Alan Stan	-
VOC-037 Chloromethane		mg/L		08/04/2020	Dr Alan Stan	-
VOC-038 cis-1,2-Dichloro	ethene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-039 cis-1,3-Dichloro		mg/L		08/04/2020	Dr Alan Stan	•
VOC-040 Dibromomethan	ne <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-041 Dichlorodifluoro	omethane <0.001	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-042 Dichloromethar	ne <0.005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-043 Hexachlorobuta	adiene <0.0002	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-044 Tetrachloroethe	ene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-045 trans-1,2-Dichlo	proethene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-046 trans-1,3-Dichlo	propropene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-047 Trichloroethene	e <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-048 Trichlorofluoror	nethane <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-049 Vinyl Chloride	<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-050 1,2,3-Trichlorot		mg/L		08/04/2020	Dr Alan Stan	5
VOC-051 1,2,4-Trichlorot		mg/L		08/04/2020	Dr Alan Stan	-
VOC-052 1,2-Dichlorober		mg/L		08/04/2020	Dr Alan Stan	
VOC-053 1,3-Dichlorober		mg/L		08/04/2020	Dr Alan Stan	5
VOC-054 1,4-Dichlorober		mg/L		08/04/2020	Dr Alan Stan	-
						-
VOC-055 2-Chlorotoluene		mg/L		08/04/2020	Dr Alan Stan	-
VOC-056 4-Chlorotoluene		mg/L		08/04/2020	Dr Alan Stan	-
VOC-057 Bromobenzene		mg/L		08/04/2020	Dr Alan Stan	-
VOC-058 Chlorobenzene		mg/L		08/04/2020	Dr Alan Stan	-
VOC-059 1,3,5-Trichlorok		mg/L		08/04/2020	Dr Alan Stan	-
VOC-060 4-Methyl-2-Pen	tanone <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP



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

Page 72 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363-	-28 Site Levin Leachate	Pond	Map Ref.	Date Sampled 01/04/2020 00:00		Received 2020 14:28	Order No. 0
	9249-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
OC-061	Carbon disulphide	<0.0005	mg/L		08/04/2020	Dr Alan Star	nley KTP
OC-062	Bromodichloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	nley KTP
/OC-063	Bromoform	< 0.0005	mg/L		08/04/2020	Dr Alan Star	nley KTP
/OC-064	Chloroform	< 0.0005	mg/L		08/04/2020	Dr Alan Star	nley KTP
/OC-065	Dibromochloromethane	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
SampleSite20/17363-29Levin HS1Notes: 179250-0 Levin Landfill Sample		Map Ref.	Date Sampled 03/04/2020 00:00	Date Received Orde 03/04/2020 14:32 0		Order No . 0	
	Test	Result	Units		Test Date	Signatory	
0001	pH	7.7	Units		03/04/2020	Gordon McA	Arthur KTP
	Suspended Solids - Total	39	g/m³		03/04/2020	Gordon McA	
0002	Total (NP) Organic Carbon	7.9	g/m³		04/04/2020	Amit Kumar	
	. , -		g CaCO3/m³				
0052	Alkalinity - Total	61 26.4	8		03/04/2020	Gordon Mc/	
0055	Conductivity at 25°C	26.4	mS/m		03/04/2020	Gordon McA	
	Chemical Oxygen Demand	28	g/m³		03/04/2020	Gordon McA	
0180	BOD5 - Soluble Carbonaceou		g/m³		03/04/2020	Marylou Cal	
0602	Chloride	26.6	g/m³		04/04/2020	Shanel Kum	
0605	Nitrate - Nitrogen	0.04	g/m³		04/04/2020	Shanel Kum	
0607	Sulphate	17.9	g/m³		04/04/2020	Shanel Kum	
	Ammonia Nitrogen	0.05	g/m³		04/04/2020	Divina Laga	
1642	Total Hardness	71	g CaCO3/m³		04/04/2020	Shanel Kum	ar KTP
1810	Calcium - Dissolved	15.1	g/m³		04/04/2020	Shanel Kum	ar KTP
1819	Iron - Dissolved	0.011	g/m³		04/04/2020	Shanel Kum	ar KTP
1822	Magnesium - Dissolved	8.03	g/m³		04/04/2020	Shanel Kum	ar KTP
1834	Sodium - Dissolved	23.3	g/m³		04/04/2020	Shanel Kum	ar KTP
2088	Dissolved Reactive Phosphor	us0.019	g/m³		04/04/2020	Divina Laga	zon KTP
6701	Aluminium - Dissolved	0.008	g/m³		04/04/2020	Shanel Kum	ar KTP
6703	Arsenic - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kum	ar KTP
6707	Boron - Dissolved	0.07	g/m³		04/04/2020	Shanel Kum	ar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		04/04/2020	Shanel Kum	ar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kum	ar KTP
6713	Copper - Dissolved	0.0009	g/m³		04/04/2020	Shanel Kum	ar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	ar KTP
6721	Manganese - Dissolved	0.0339	g/m³		04/04/2020	Shanel Kum	ar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
6724	Nickel - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
6726	Potassium - Dissolved	3.51	g/m³		04/04/2020	Shanel Kum	
6738	Zinc - Dissolved	< 0.002	g/m³		04/04/2020	Shanel Kum	
	E. coli	830	cfu/100mL		03/04/2020	Yuemei Yu	
	Volatile Fatty Acids	< 5 [*]	g/m ³		5510412020		ngh Transcribe
MO_5000	Total Halogonatod Phonelics	< 0.05	a/m ³			by Prashilla Sir	ah Transsrib
NO-0002	Total Halogenated Phenolics	► 0.00	g/m³			by	igh Transcribe
P1859	Sample Filtration	Completed			04/04/2020	Robyn Made	ge .
Sample 20/17363- Notes: 17	-30 Site -30 Levin HS3 9252-0 Levin Landfill Sample		Map Ref.	Date Sampled 03/04/2020 00:00		Received 2020 14:32	Order No 0
	Test	Result	Units		Test Date	Signatory	
0001	рН	7.6			03/04/2020	Gordon McA	rthur KTP
0002	Suspended Solids - Total	21	g/m³		03/04/2020	Gordon Mc/	
0002	Total (NP) Organic Carbon	7.8	g/m³		04/04/2020	Amit Kumar	
0040	Alkalinity - Total	65	g CaCO3/m³		03/04/2020	Gordon McA	
	r manniy - Tular	00	y CaCCO/III		00/07/2020		
antippo.							



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

Page 73 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Sample 20/17363	Site 3-30 Levin HS3		Map Ref.	Date Sampled 03/04/2020 00:00		eceived 2020 14:32	Order No. 0
	79252-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
0055	Conductivity at 25°C	27.8	mS/m		03/04/2020	Gordon McA	rthur KTP
0081	Chemical Oxygen Demand	23	g/m³		03/04/2020	Gordon McA	rthur KTP
0180	BOD5 - Soluble Carbonaceous	< 1	g/m³		03/04/2020	Marylou Cat	oral KTP
0602	Chloride	28.3	g/m³		04/04/2020	Shanel Kum	
0605	Nitrate - Nitrogen	0.09	g/m³		04/04/2020	Shanel Kum	ar KTP
0607	Sulphate	17.5	g/m³		04/04/2020	Shanel Kum	
0760	Ammonia Nitrogen	0.09	g/m³		04/04/2020	Divina Laga	
1642	Total Hardness	73	g CaCO3/m³		04/04/2020	Shanel Kum	
1810	Calcium - Dissolved	15.8	g/m³		04/04/2020	Shanel Kum	
1819	Iron - Dissolved	0.021	g/m³		04/04/2020	Shanel Kum	
1822	Magnesium - Dissolved	8.20	g/m³		04/04/2020	Shanel Kum	
1834	Sodium - Dissolved	23.8	g/m³		04/04/2020	Shanel Kum	
2088	Dissolved Reactive Phosphorus		Ū.		04/04/2020		
			g/m³			Divina Laga	
6701	Aluminium - Dissolved	0.005	g/m³		04/04/2020	Shanel Kum	
6703	Arsenic - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kum	
6707	Boron - Dissolved	0.07	g/m³		04/04/2020	Shanel Kum	
6708	Cadmium - Dissolved	< 0.0002	g/m³		04/04/2020	Shanel Kum	
6711	Chromium - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kum	
6713	Copper - Dissolved	0.0030	g/m³		04/04/2020	Shanel Kum	
6718	Lead - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	
6721	Manganese - Dissolved	0.0406	g/m³		04/04/2020	Shanel Kum	ar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	ar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kum	ar KTP
6726	Potassium - Dissolved	3.64	g/m³		04/04/2020	Shanel Kum	ar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		04/04/2020	Shanel Kum	ar KTP
M0104	E. coli	410	cfu/100mL		03/04/2020	Yuemei Yu ł	KTP
10-5001	Volatile Fatty Acids	< 5	g/m³			Prashilla Sin	gh Transcribe
						by	
10-5002	2 Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sin	gh Transcribe
						by	
P1859	Sample Filtration	Completed			04/04/2020	Robyn Madg	je.
Sample Site 20/17363-31 Levin HS2 Notes: 179254-0 Levin Landfill Sample		Map Ref.	Date Sampled 03/04/2020 00:00	Date Received Order No 03/04/2020 14:32 0		Order No. 0	
	Test	Result	Units		Test Date	Signatory	
0001	pH	7.7			03/04/2020	Gordon McA	rthur KTP
0002	Suspended Solids - Total	24	g/m³		03/04/2020	Gordon McA	
0040	Total (NP) Organic Carbon	7.6	g/m³		04/04/2020	Amit Kumar	
0040	Alkalinity - Total	65	g CaCO3/m³		03/04/2020	Gordon McA	
	•		mS/m		03/04/2020		
0055	Conductivity at 25°C	27.9				Gordon McA	
0081	Chemical Oxygen Demand	21	g/m³		03/04/2020	Gordon McA	
0180	BOD5 - Soluble Carbonaceous		g/m³		03/04/2020	Marylou Cat	
0602	Chloride	28.0	g/m³		04/04/2020	Shanel Kum	
0605	Nitrate - Nitrogen	0.08	g/m³		04/04/2020	Shanel Kum	
0607	Sulphate	17.3	g/m³		04/04/2020	Shanel Kum	
0760	Ammonia Nitrogen	0.14	g/m³		04/04/2020	Divina Laga	
	Total Hardness	74	g CaCO3/m³		04/04/2020	Shanel Kum	ar KTP
1642		15.9	g/m³		04/04/2020	Shanel Kum	
1642 1810	Calcium - Dissolved	10.0	U U				
	Calcium - Dissolved Iron - Dissolved	0.010	g/m³		04/04/2020	Shanel Kum	ar KTP
1810			g/m³ g/m³		04/04/2020 04/04/2020	Shanel Kum Shanel Kum	
1810 1819	Iron - Dissolved	0.010	•				ar KTP



20/17363	Site 3-31 Levin HS2		Map Ref.	Date Sampled 03/04/2020 00:00		eceived 2020 14:32	Order No. 0
Notes: 17	79254-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
6701	Aluminium - Dissolved	0.007	g/m³		04/04/2020	Shanel Kuma	ar KTP
6703	Arsenic - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kuma	ar KTP
6707	Boron - Dissolved	0.07	g/m³		04/04/2020	Shanel Kuma	ar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		04/04/2020	Shanel Kuma	ar KTP
6711	Chromium - Dissolved	< 0.001	g/m³		04/04/2020	Shanel Kuma	ar KTP
6713	Copper - Dissolved	0.0016	g/m³		04/04/2020	Shanel Kuma	ar KTP
6718	Lead - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kuma	ar KTP
6721	Manganese - Dissolved	0.0420	g/m³		04/04/2020	Shanel Kuma	ar KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kuma	ar KTP
6724	Nickel - Dissolved	< 0.0005	g/m³		04/04/2020	Shanel Kuma	ar KTP
6726	Potassium - Dissolved	3.62	g/m³		04/04/2020	Shanel Kuma	ar KTP
6738	Zinc - Dissolved	< 0.002	g/m³		04/04/2020	Shanel Kuma	
M0104	E. coli	790	cfu/100mL		03/04/2020	Yuemei Yu K	
	Volatile Fatty Acids	< 5 [*]	g/m ³		03/04/2020	Prashilla Sing	
viO-500 i	Volatile Fatty Actus	< 5	g/m				gii franscribe
40 5000	Tatal Halana at al Dhana l'ar		- 1 3			by	
viU-5002	Total Halogenated Phenolics	< 0.05	g/m³			Prashilla Sing	yn i ranscribe
D4050		Complete				by Debug Mede	_
P1859	Sample Filtration	Completed			04/04/2020	Robyn Madg	е.
Sample	Site		Map Ref.	Date Sampled	Date R	eceived	Order No.
20/17363				03/04/2020 00:00	03/04/2	2020 14:32	0
Notes: 17	79256-0 Levin Landfill Sample						
	Test	Result	Units		Test Date	Signatory	
0001	рН	7.8			03/04/2020	Gordon McA	rthur KTP
0002	Suspended Solids - Total	23	g/m³		03/04/2020	Gordon McA	rthur KTP
	Total (ND) Organia Carbon	8.1	g/m³		04/04/2020	Amit Kumar I	KTP
0040	Total (NP) Organic Carbon	•••	5				
0040 0052	Alkalinity - Total	61	g CaCO3/m³		03/04/2020	Gordon McA	rthur KTP
	. , 📮		0			Gordon McA Gordon McA	
0052	Alkalinity - Total	61	g CaCO3/m³		03/04/2020		rthur KTP
0052 0055	Alkalinity - Total Conductivity at 25°C	61 26.2 24	g CaCO3/m³ mS/m		03/04/2020 03/04/2020	Gordon McA	rthur KTP rthur KTP
0052 0055 0081	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand	61 26.2 24	g CaCO3/m³ mS/m g/m³		03/04/2020 03/04/2020 03/04/2020	Gordon McA Gordon McA	rthur KTP rthur KTP ral KTP
0052 0055 0081 0180	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride	61 26.2 24 5 < 1	g CaCO3/m³ mS/m g/m³ g/m³		03/04/2020 03/04/2020 03/04/2020 03/04/2020	Gordon McA Gordon McA Marylou Cab	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen	61 26.2 24 5 < 1 26.6 0.04	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate	61 26.2 24 5 < 1 26.6 0.04 18.1	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Divina Lagaz	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP ar KTP zon KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Divina Lagaz Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP con KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Divina Lagaz Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP zon KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Divina Lagaz Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved	61 26.2 24 s < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Divina Lagaz Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³ g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP an KTP ar KTP ar KTP ar KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 iso.018	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 us0.018 0.011	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6707	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Arsenic - Dissolved Boron - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001 0.06	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6707 6708	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Boron - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6707	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Arsenic - Dissolved Boron - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001 0.06	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0081 0180 0602 0605 0607 0760 1642 1810 1822 1834 2088 6701 6703 6707 6708	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Boron - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 150.018 0.011 < 0.001 0.06 < 0.0002	g CaCO3/m ³ mS/m g/m ³ g/m ³ g/m ³ g/m ³ g CaCO3/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6707 6708 6711	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Arsenic - Dissolved Boron - Dissolved Cadmium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 0.011 < 0.001 0.06 < 0.0002 < 0.001	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6707 6708 6711 6713	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Arsenic - Dissolved Boron - Dissolved Cadmium - Dissolved Cadmium - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001 0.06 < 0.0002 < 0.001 0.0008	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6707 6708 6711 6713 6713	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Boron - Dissolved Boron - Dissolved Cadmium - Dissolved Cadmium - Dissolved Chromium - Dissolved Copper - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001 0.06 < 0.0002 < 0.001 0.0008 < 0.0005	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6703 6707 6708 6711 6713 6718 6721	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Boron - Dissolved Boron - Dissolved Cadmium - Dissolved Cadmium - Dissolved Cadmium - Dissolved Cadmium - Dissolved Cadmium - Dissolved Cadmium - Dissolved Copper - Dissolved Lead - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 15.0018 0.011 < 0.001 0.06 < 0.0002 < 0.0002 < 0.0005 0.0385	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6701 6703 6707 6708 6711 6713 6713 6721 6722 6724	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Arsenic - Dissolved Boron - Dissolved Cadmium - Dissolved Cadmium - Dissolved Chromium - Dissolved Copper - Dissolved Lead - Dissolved Manganese - Dissolved Marcury - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 is0.018 0.011 < 0.001 0.06 < 0.0001 0.06 < 0.0002 < 0.0005 0.0385 < 0.0005 < 0.0005 < 0.0005	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP
0052 0055 0081 0180 0602 0605 0607 0760 1642 1810 1819 1822 1834 2088 6701 6703 6701 6703 6707 6708 6711 6713 6713 6718 6721 6722	Alkalinity - Total Conductivity at 25°C Chemical Oxygen Demand BOD5 - Soluble Carbonaceous Chloride Nitrate - Nitrogen Sulphate Ammonia Nitrogen Total Hardness Calcium - Dissolved Iron - Dissolved Magnesium - Dissolved Sodium - Dissolved Dissolved Reactive Phosphoru Aluminium - Dissolved Boron - Dissolved Boron - Dissolved Cadmium - Dissolved Cadmium - Dissolved Chromium - Dissolved Lead - Dissolved Manganese - Dissolved	61 26.2 24 5 < 1 26.6 0.04 18.1 0.03 69 14.7 0.019 7.85 22.6 150.018 0.011 < 0.001 0.06 < 0.0002 < 0.0001 0.008 < 0.0005 0.0385 < 0.0005	g CaCO3/m ³ mS/m g/m ³ g/m ³		03/04/2020 03/04/2020 03/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020 04/04/2020	Gordon McA Gordon McA Marylou Cab Shanel Kuma Shanel Kuma	rthur KTP rthur KTP ral KTP ar KTP



SampleSite20/17363-32LevinNotes: 179256-0 Levin Landfil	HS1A I Sample	Map Ref.	Date Sampled 03/04/2020 00:00		eceived 2020 14:32	Order No. 0
Test	Result	Units		Test Date	Signatory	
MO-5001 Volatile Fatty Acids	< 5 *	g/m³			Prashilla Sin	igh Transcribed
					by	
MO-5002 Total Halogenated I	Phenolics < 0.05	g/m³			Prashilla Sin	igh Transcribed
					by	
P1859 Sample Filtration	Completed			04/04/2020	Robyn Madg	ge.

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

Test Methodology:

Test	Methodology	Detection Limit
рН	Dedicated pH meter following APHA Online Edition Method 4500 H.	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	1 g/m³
	inhibitor.	
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 USEPA 8270 Phenols.	0.01 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
-,		



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 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Test	Methodology	Detection Limit
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
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
Terbuthylazine	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 CC-MS	0.0001 mg/L
Acenapthene	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
	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L
benz(a)anthracene		
benz(a)anthracene Benzo(a)pyrene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L



Wellington 85 Port Road, Seaview Lower Hutt 5045 Phone: (04) 576-5016 Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227

Page 77 of 80 Report Number: 20/17363-1 ELS 29 April 2020 16:01:18

Test	Methodology	Detection Limit
Test 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 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		
Fluorene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	0.0001 mg/L 0.0001 mg/L
	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	
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
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',6-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-Butylbenezene	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	0.0005 mg/L
	USEPA Method 8260.	
1,1,1-Trichloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
	USEPA Method 8260.	
1,1,2,2-Tetrachloroethane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
	USEPA Method 8260.	0.0005
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	0.0005 mg/L
	USEPA Method 8260.	0.0000 mg/L
1,1-Dichloroethene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
	USEPA Method 8260.	
1,1-Dichloropropene	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
	USEPA Method 8260.	
1,2,3-Trichloropropane	USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
1,2,3-Trichloropropane		0.0005 mg/L
1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L 0.001 mg/L
	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	
	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	
1,2-Dibromo-3-chloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260. 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-Dibromo-3-chloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.001 mg/L



Test	Methodology	Detection Limit
	USEPA Method 8260.	
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 USEPA Method 8260.	0.0005 mg/L
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



Test	Methodology	Detection Limit
4-Chlorotoluene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA	0.0005 mg/L
	Method 8260.	
Bromobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA	0.0005 mg/L
	Method 8260.	
Chlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA	0.0005 mg/L
	Method 8260.	
1,3,5-Trichlorobenzene	VOC Halogenated Aromatic Compound analysed by GCMS following an in house method based on USEPA	0.0005 mg/L
	Method 8260.	
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	0.0005 mg/L
	known as Tribromomethane.	
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.

"<" 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.

g/m3 is the equivalent to mg/L and 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 IANZ", 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



🔅 eurofins

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

ELS

Eurofins ELS Limited

Analytical Report

Report Number: 20/19100 Issue: 1 21 April 2020

Sample 20/19100 Notes: 18	Site D-01 Levin C2 80570-0 Levin Landfill Sample		Map Ref.	Date Sampled 08/04/2020 00:00		Received Order No. 2020 14:34 0
	Test	Result	Units		Test Date	Signatory
0001	рН	7.2			08/04/2020	Gordon McArthur KTP
0002	Suspended Solids - Total	516	g/m³		08/04/2020	Marylou Cabral KTP
0040	Total (NP) Organic Carbon	45.6	g/m³		10/04/2020	Sharon van Soest KTP
0052	Alkalinity - Total	818	g CaCO3/m³		08/04/2020	Gordon McArthur KTP
0055	Conductivity at 25°C	346	mS/m		08/04/2020	Gordon McArthur KTP
0081	Chemical Oxygen Demand	127	g/m³		09/04/2020	Gordon McArthur KTP
0180	BOD5 - Soluble Carbonaceous	< 6	g/m³		09/04/2020	Marylou Cabral KTP
0602	Chloride	492	g/m³		09/04/2020	Amit Kumar KTP
0605	Nitrate - Nitrogen	0.08	g/m³		09/04/2020	Amit Kumar KTP
0607	Sulphate	42.3	g/m³		09/04/2020	Amit Kumar KTP
0760	Ammonia Nitrogen	169	g/m³		11/04/2020	Athena Cao
1642	Total Hardness	277	g CaCO3/m³		11/04/2020	Shuyu Zhao KTP
1810	Calcium - Dissolved	54.7	g/m³		11/04/2020	Shuyu Zhao KTP
1819	Iron - Dissolved	0.158	g/m³		11/04/2020	Shuyu Zhao KTP
1822	Magnesium - Dissolved	34.0	g/m³		11/04/2020	Shuyu Zhao KTP
1834	Sodium - Dissolved	291	g/m³		11/04/2020	Shuyu Zhao KTP
2088	Dissolved Reactive Phosphorus	s0.013	g/m³		11/04/2020	Athena Cao
6701	Aluminium - Dissolved	0.041	g/m³		14/04/2020	Shanel Kumar KTP
6703	Arsenic - Dissolved	0.002	g/m³		09/04/2020	Sharon van Soest KTP
6707	Boron - Dissolved	2.24	g/m³		14/04/2020	Shanel Kumar KTP
6708	Cadmium - Dissolved	< 0.0002	g/m³		09/04/2020	Sharon van Soest KTP
6711	Chromium - Dissolved	0.002	g/m³		09/04/2020	Sharon van Soest KTP
6713	Copper - Dissolved	0.0017	g/m³		09/04/2020	Sharon van Soest KTP
6718	Lead - Dissolved	< 0.0005	g/m³		09/04/2020	Sharon van Soest KTP
6721	Manganese - Dissolved	0.0650	g/m³		09/04/2020	Sharon van Soest KTP
6722	Mercury - Dissolved	< 0.0005	g/m³		14/04/2020	Shanel Kumar KTP
6724	Nickel - Dissolved	0.0017	g/m³		14/04/2020	Shanel Kumar KTP
6726	Potassium - Dissolved	91.5	g/m³		14/04/2020	Shanel Kumar KTP
6738	Zinc - Dissolved	0.009	g/m³		09/04/2020	Sharon van Soest KTP
M0104	E. coli	< 4	cfu/100mL		08/04/2020	Yuemei Yu KTP
MO-5001	Volatile Fatty Acids	< 5 *	g/m³			Lizzie Addis Transcribed by
MO-5002	2 Total Halogenated Phenolics	< 0.05	g/m³			Lizzie Addis Transcribed by
P1859	Sample Filtration	Completed			09/04/2020	Robyn Madge .
SVOC-00	1 2,3-Diuron	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-002	2 a-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-00	3 a-chlordane	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-004	4 Aldrin	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-00	5 b-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-00	6 cis-Permethrin	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-00	7 Dieldrin	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-008	8 Endosulfan II	<0.005	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-00	9 Endosulfan Sulfate	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-01	0 Endrin	<0.0001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-01	1 Endrin Aldehyde	<0.001	mg/L		09/04/2020	Dr Alan Stanley KTP
SVOC-012	2 Endrin Ketone	<0.0001	mg/L		09/04/2020	Dr Alan Stanley 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 1 of 8 Report Number: 20/19100-1 ELS 21 April 2020 16:00:43

•	te evin C2 ndfill Sample	Map Ref.	Date Sampled 08/04/2020 00:00		Received 2020 14:34	Order No. 0
Test	Result	Units		Test Date	Signatory	
SVOC-013 Gamma-Chlord		mg/L		09/04/2020	Dr Alan Star	lev KTP
SVOC-014 Heptachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-015 Heptachlor Epo		mg/L		09/04/2020	Dr Alan Star	
SVOC-016 Hexachloroben		mg/L		09/04/2020	Dr Alan Star	-
SVOC-017 Lindane (g-BH		mg/L		09/04/2020	Dr Alan Stan	-
SVOC-018 Methoxychlor	< 0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-019 p,p'-DDD	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-020 p,p'DDE	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-021 p,p'-DDT	<0.001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-022 Procymidone	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-023 Propanil	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-024 Endosulfan I	<0.001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-025 Alachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-027 Atrazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-028 Bromacil	<0.005	mg/L		09/04/2020	Dr Alan Star	-
SVOC-029 Carbofuran	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-030 Cyanazine	<0.005	mg/L		09/04/2020	Dr Alan Stan	
SVOC-031 d-BHC	<0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-032 Metalaxyl-M	<0.001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-033 Metolachlor	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-034 Metribuzin	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-035 Molinate	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-037 Oxadiazon	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-038 Pendimethalin	<0.002	mg/L		09/04/2020	Dr Alan Star	-
SVOC-039 Propazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-040 Pyriproxyfen	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-041 Simazine	<0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-042 Terbuthylazine	<0.0001	mg/L		09/04/2020	Dr Alan Stan	-
SVOC-043 Trifluralin	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-044 Hexazinone	<0.001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-045 Chlorpyrifos	<0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-046 Diazinon	<0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-047 Dimethoate	<0.001	mg/L		09/04/2020	Dr Alan Star	
SVOC-048 Pirimiphos meth	nyl <0.0001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-049 Acenapthene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-050 Acenaphthylene	e < 0.0010	mg/L		09/04/2020	Dr Alan Star	-
SVOC-051 Anthracene	< 0.0010	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-052 benz(a)anthrace	ene < 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-053 Benzo(a)pyrene	e < 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-054 Total Benzo(b)	and Benzo(k) < 0.0010	mg/L		09/04/2020	Dr Alan Star	-
fluoranthrene		0				
SVOC-055 Benzo(g,h,i)per	vlene <0.001	mg/L		09/04/2020	Dr Alan Star	ley KTP
SVOC-057 Chrysene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	•
SVOC-058 Dibenz(a,h)anth	racene < 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-059 Fluoranthene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-060 Fluorene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-061 Indeno(1,2,3-cd		mg/L		09/04/2020	Dr Alan Star	-
SVOC-062 Naphthalene	<0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-063 Phenanthrene	<0.0001	mg/L		09/04/2020	Dr Alan Star	
SVOC-064 Pyrene	< 0.0001	mg/L		09/04/2020	Dr Alan Star	-
SVOC-066 2,2',3,4,4',5'-He		mg/L		09/04/2020	Dr Alan Star	-
	achlorobiphenyl <0.0001	mg/L		09/04/2020	Dr Alan Star	-



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

Sample 20/19100-01 Notes: 180570-01	Site Levin C2 evin Landfill Sample		Map Ref.	Date Sampled 08/04/2020 00:00		Received 2020 14:34	Order No. 0
Test		Result	Units		Test Date	Signatory	
SVOC-068 2,4,4'-Tri	chlorobinhenvl	<0.0001	mg/L		09/04/2020	Dr Alan Star	lev KTP
SVOC-069 2,4-Dichl		< 0.0001	mg/L		09/04/2020	Dr Alan Star	
	.,5',6-Heptachlorobipl		mg/L		09/04/2020	Dr Alan Star	-
SVOC-072 Bis(2-eth		< 0.0001	mg/L		09/04/2020	Dr Alan Star	
VOC-001 1,2,4-Tri		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-002 1,3,5-Tri	•	< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-003 Benzene	•	0.0011	mg/L		08/04/2020	Dr Alan Star	-
VOC-005 Isopropy		<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-007 Naphthal		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-008 n-Butylbe		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-009 n-Propyll		< 0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-010 o-Xylene		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-011 p-Isopror		< 0.0005	mg/L		08/04/2020	Dr Alan Star	,
VOC-013 sec-Buty		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-014 Styrene		< 0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-015 tert-Butyl	benzene	< 0.0005	mg/L		08/04/2020	Dr Alan Star	
VOC-016 Toluene		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
	n Xylene, Ethylbenzer		mg/L		08/04/2020	Dr Alan Star	-
VOC-018 1,1,1,2-T		<0.0005	mg/L		08/04/2020	Dr Alan Stan	-
VOC-019 1,1,1-Tri		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-020 1,1,2,2-T		<0.0005	mg/L		08/04/2020	Dr Alan Stan	
VOC-021 1,1,2-Trie		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-022 1,1-Dichl		< 0.0005	mg/L		08/04/2020	Dr Alan Star	,
VOC-023 1,1-Dichl		< 0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-024 1,1-Dichl	oropropene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-025 1,2,3-Tri	chloropropane	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-026 1,2-Dibro	mo-3-chloropropane	<0.001	mg/L		08/04/2020	Dr Alan Star	-
VOC-027 1,2-Dibro	omoethane	<0.0002	mg/L		08/04/2020	Dr Alan Star	-
VOC-028 1,2-Dichl	oroethane	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-029 1,2-Dichl	oropropane	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-030 1,3-Dichl	oropropane	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-031 2,2-Dichl		<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-032 Allyl chlo	ride	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-033 Bromoch	loromethane	<0.0012	mg/L		08/04/2020	Dr Alan Star	
VOC-034 Bromom	ethane	<0.001	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-035 Carbon t	etrachloride	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-036 Chloroet	nane	<0.001	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-037 Chlorom	ethane	<0.006	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-038 cis-1,2-D	ichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-039 cis-1,3-D	ichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-040 Dibromo	nethane	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-041 Dichlorod	lifluoromethane	<0.001	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-042 Dichloror	nethane	<0.005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-043 Hexachlo	probutadiene	<0.0002	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-044 Tetrachlo	proethene	<0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-045 trans-1,2	-Dichloroethene	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-046 trans-1,3	-Dichloropropene	<0.0005	mg/L		08/04/2020	Dr Alan Star	ley KTP
VOC-047 Trichloro	ethene	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-048 Trichloro	fluoromethane	<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-049 Vinyl Chl		<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-050 1,2,3-Tri		<0.0005	mg/L		08/04/2020	Dr Alan Star	-
VOC-051 1,2,4-Trie		<0.0005	mg/L		08/04/2020	Dr Alan Star	,
			č				-



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

	Site Levin C2 andfill Sample	Map Ref.	Date Sampled 08/04/2020 00:00		eceived 2020 14:34	Order No. 0
Test	Result	Units		Test Date	Signatory	
VOC-052 1,2-Dichlorobe	enzene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-053 1,3-Dichlorobe	enzene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-054 1,4-Dichlorobe	enzene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-055 2-Chlorotoluer	ne <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-056 4-Chlorotoluer	ne <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-057 Bromobenzen	e <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-058 Chlorobenzen	e <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-059 1,3,5-Trichlord	obenzene <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-060 4-Methyl-2-Pe	ntanone <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-061 Carbon disulpl	hide <0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-062 Bromodichloro	omethane < 0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-063 Bromoform	< 0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-064 Chloroform	< 0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP
VOC-065 Dibromochloro	omethane < 0.0005	mg/L		08/04/2020	Dr Alan Stan	ley KTP

Comments:

* Not an accredited test.

Sampled by customer using ELS approved containers.

Test Methodology:

Test	Methodology	Detection Limit
pН	Dedicated pH meter following APHA Online Edition Method 4500 H.	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/m ³
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



Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227 Dunedin 16 Lorne Street South Dunedin 9012 Phone: (03) 972-7963

Page 4 of 8 Report Number: 20/19100-1 ELS 21 April 2020 16:00:43

Test	Methodology	Detection Limit
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 USEPA 8270 Phenols.	0.01 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
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 Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.002 mg/L
	Organonitrogen Pesticide compound analysed by in-house method using GC-MS Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Pyriproxyfen		
Simazine	Organonitrogen Pesticide compound analysed by in-house method using GC-MS	0.0001 mg/L
Terbuthylazine	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



Wellington 85 Port Road, Seaview Lower Hutt 5045 Phone: (04) 576-5016 Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227

Page 5 of 8 Report Number: 20/19100-1 ELS 21 April 2020 16:00:43

Test	Methodology	Detection Limit
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
Acenapthene	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
		0.0001 mg/L
benz(a)anthracene	Polyaromatic Hydrocarbon compound analysed by in-house method using GC-MS	
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
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',6-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-Butylbenezene	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	0.0005 mg/L
1,1,2-Trichloroethane	USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
1,1-Dichloroethane	USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
1,1-Dichloroethene	USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L
1,1-Dichloropropene	USEPA Method 8260. VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on USEPA Method 8260.	0.0005 mg/L
1.2.2 Trichleropropage		0 0005 mg#
1,2,3-Trichloropropane	VOC Halogenated Alkanes and Alkenes Compound analysed by GCMS following an in house method based on	0.0005 mg/L



Wellington 85 Port Road, Seaview Lower Hutt 5045 Phone: (04) 576-5016 Rolleston 43 Detroit Drive Rolleston 7675 Phone: (03) 343-5227

Page 6 of 8 Report Number: 20/19100-1 ELS 21 April 2020 16:00:43

Test	Methodology	Detection Limit
	USEPA Method 8260.	
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 USEPA Method 8260.	0.0005 mg/L
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



Test	Methodology	Detection Limit
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.

"<" 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.

g/m3 is the equivalent to mg/L and ppm.

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

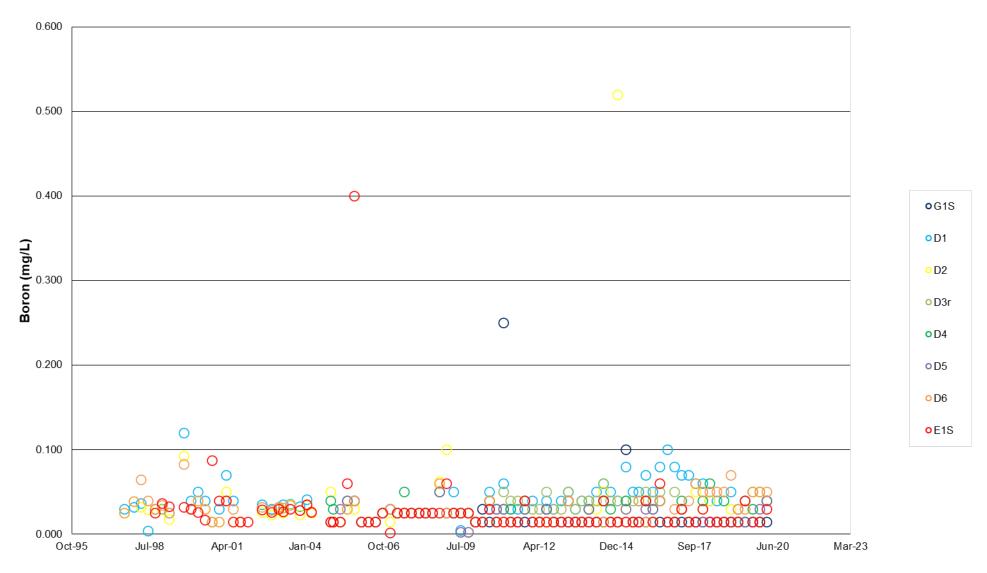
This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms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

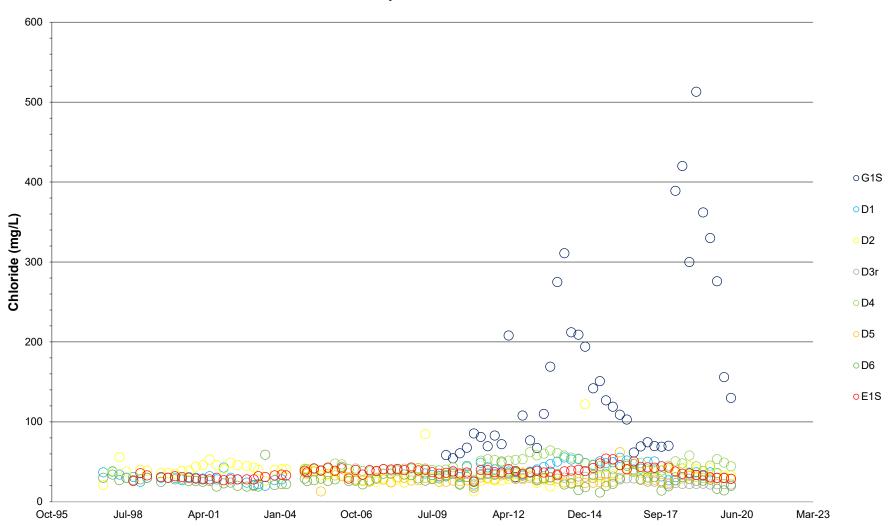
This report may not be reproduced except in full without the written approval of this laboratory.

Report Released By Rob Deacon

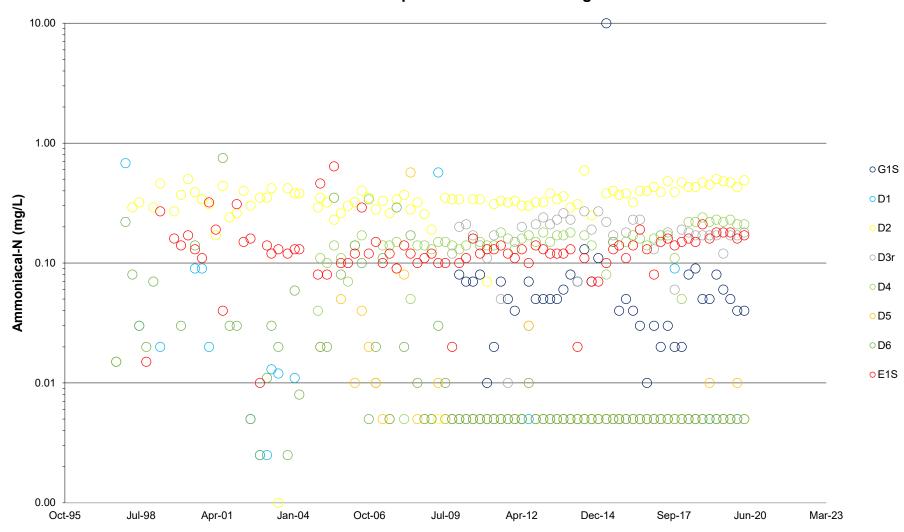
Appendix D Historical Result Graphs

Sand Aquifer Boron Concentrations

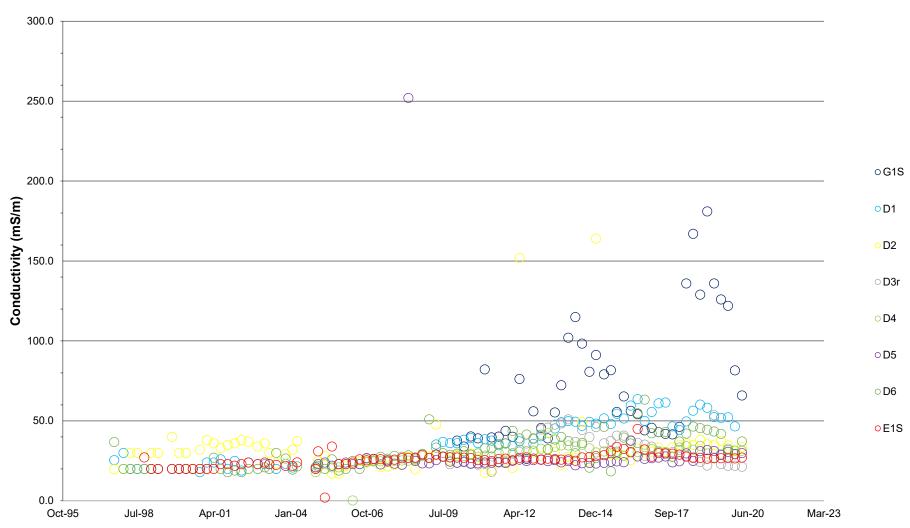




Sand Aquifer Chloride Concentrations

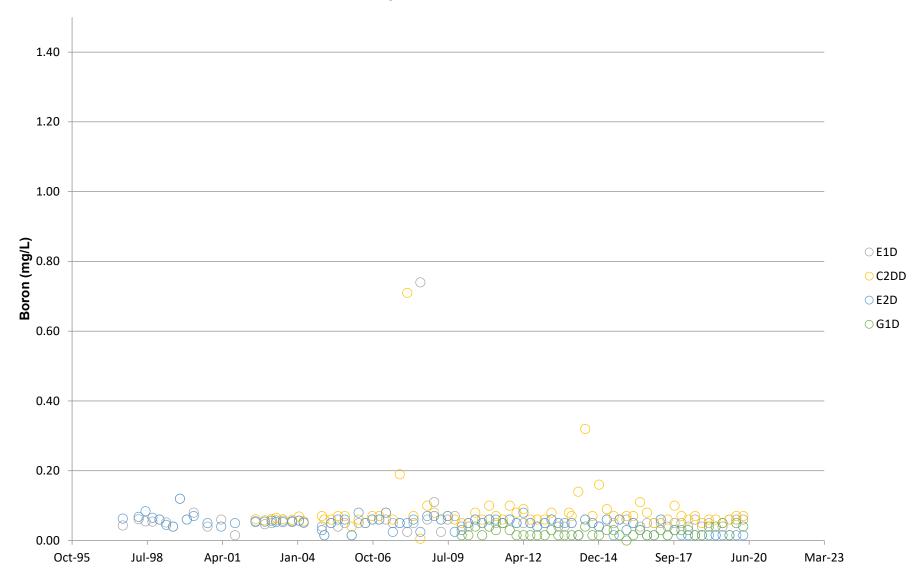


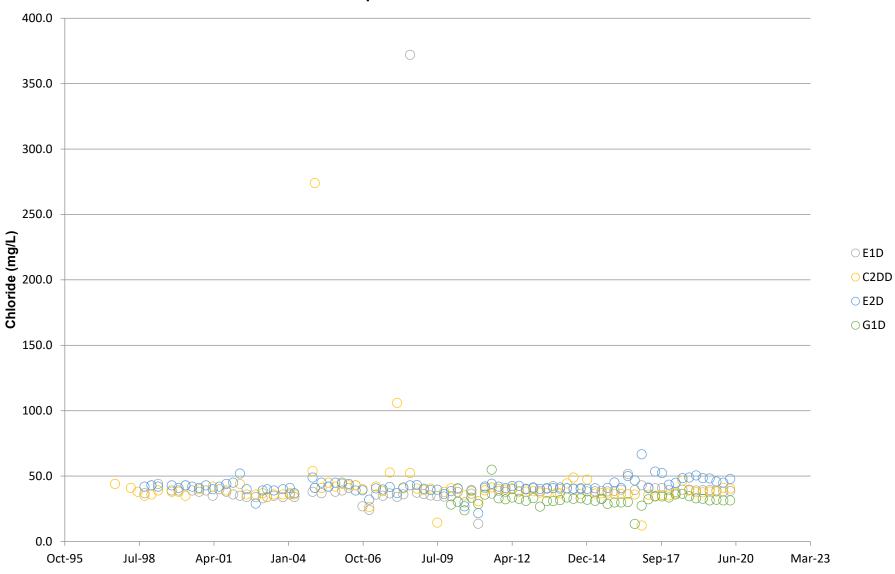
Sand Aquifer Ammoniacal-Nitrogen Concentrations



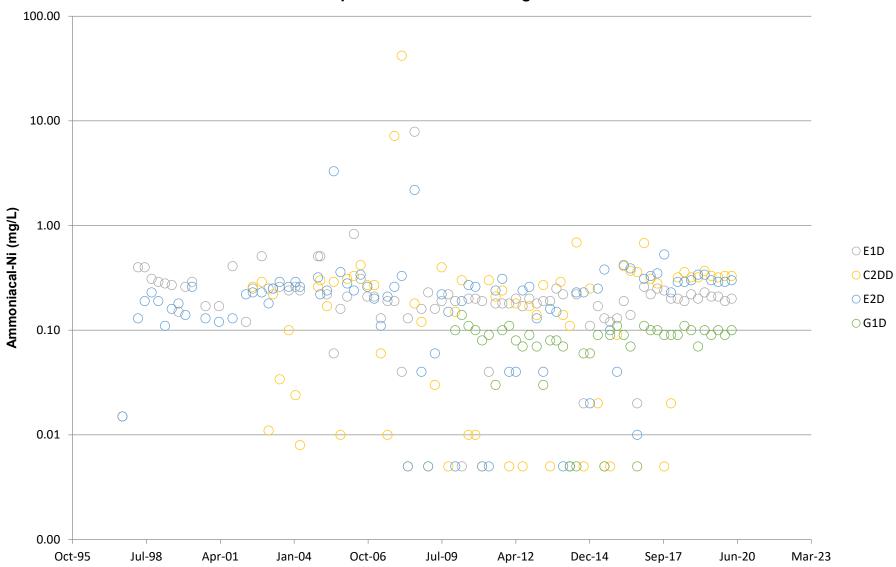
Sand Aquifer Conductivity Levels

Gravel Aquifer Boron Concentrations

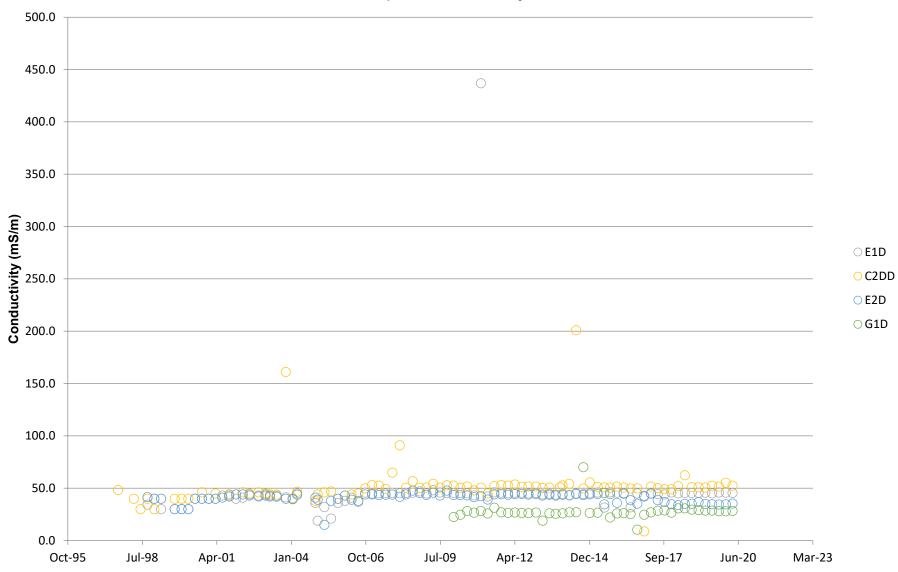




Gravel Aquifer Chloride Concentrations



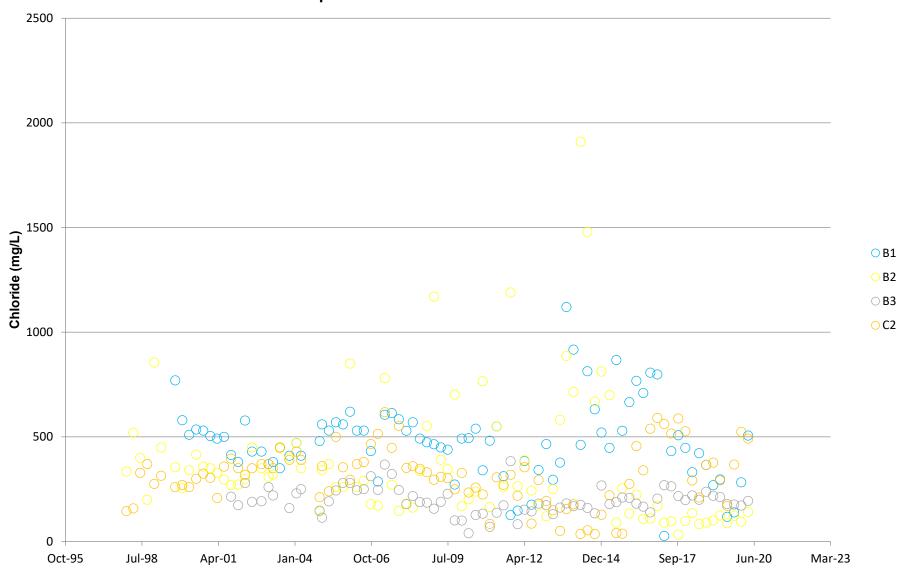
Gravel Aquifer Ammoniacal-Nitrogen Concentrations



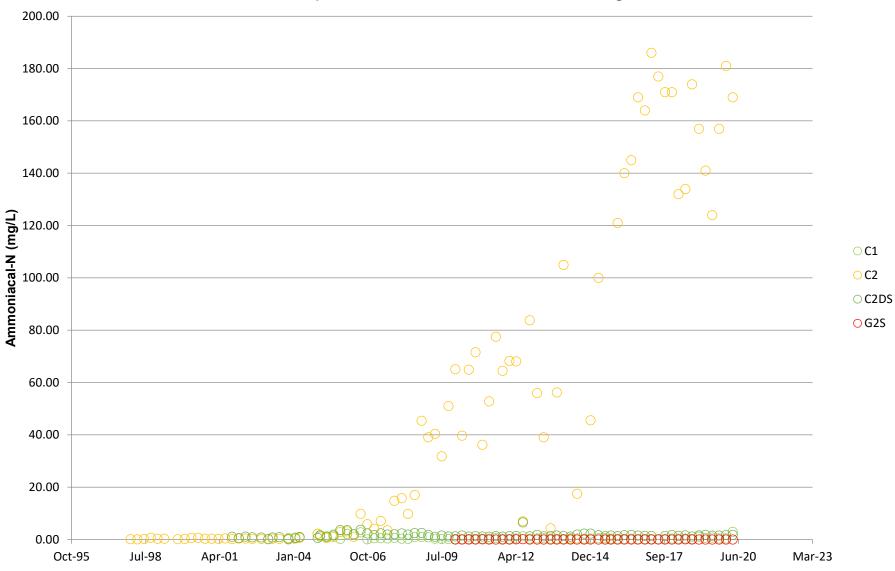
Gravel Aquifer Conductivity Levels



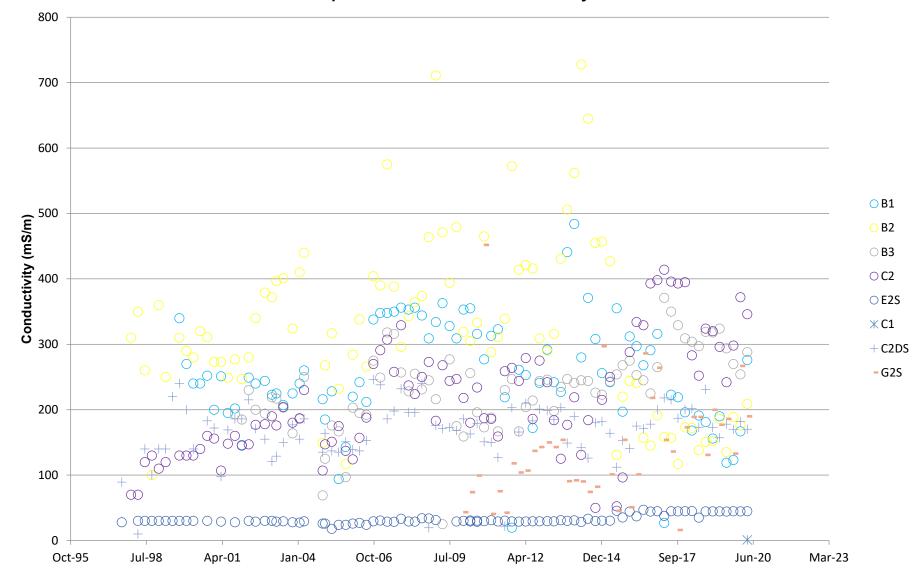
Sand Aquifer Down Gradient Boron Concentrations



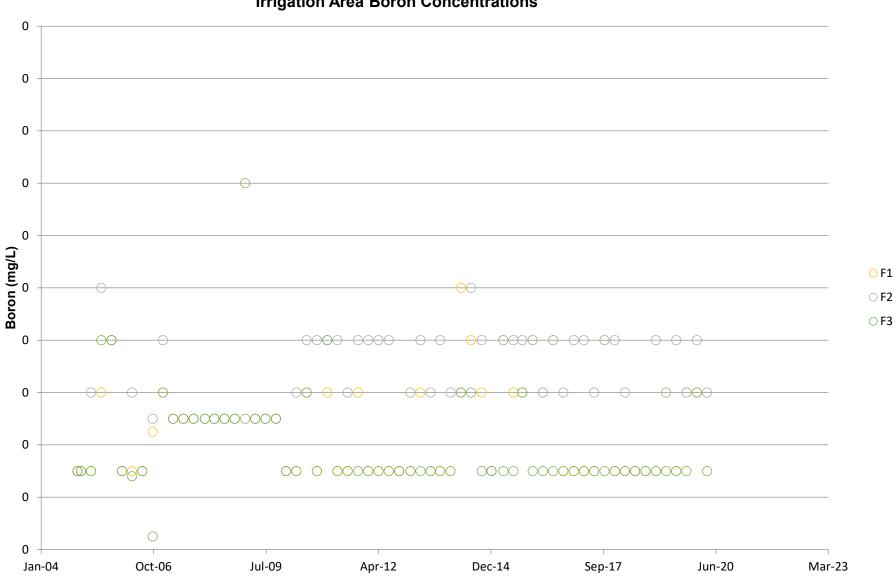
Sand Aquifer Down Gradient Chloride Concentrations



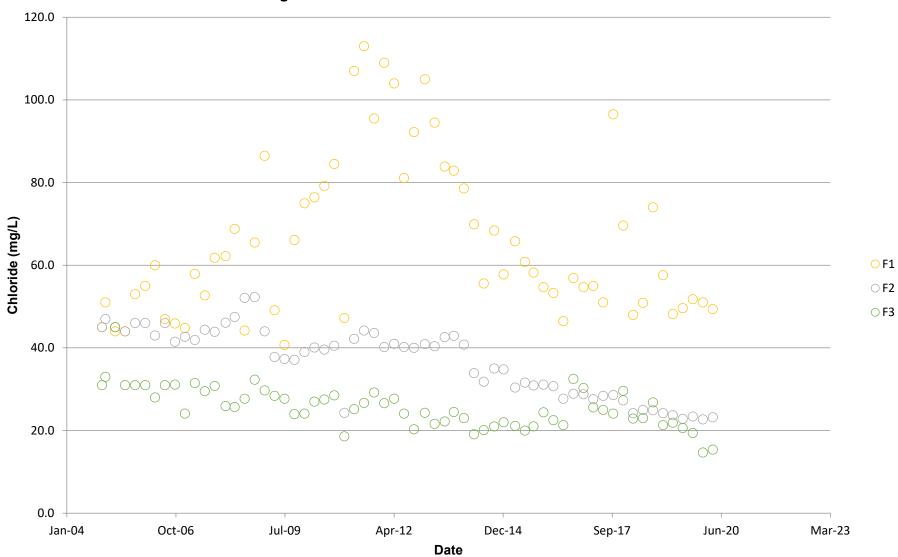
Sand Aquifer Down Gradient Ammoniacal-Nitrogen Concentrations



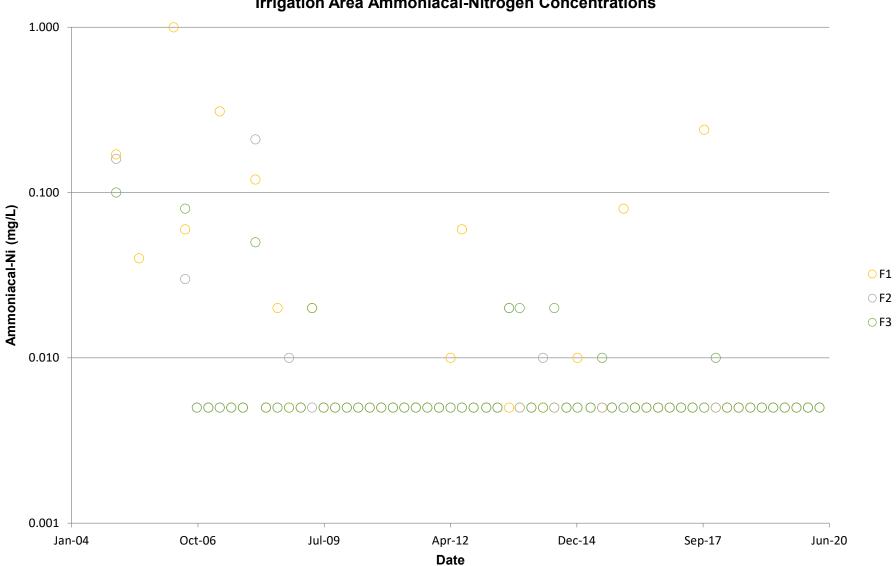
Sand Aquifer Down Gradient Conductivity Levels



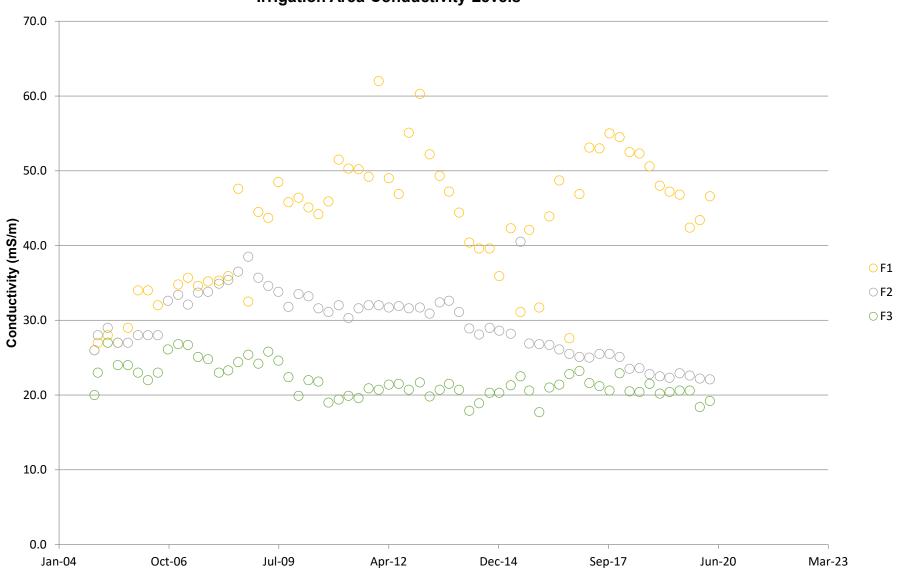
Irrigation Area Boron Concentrations



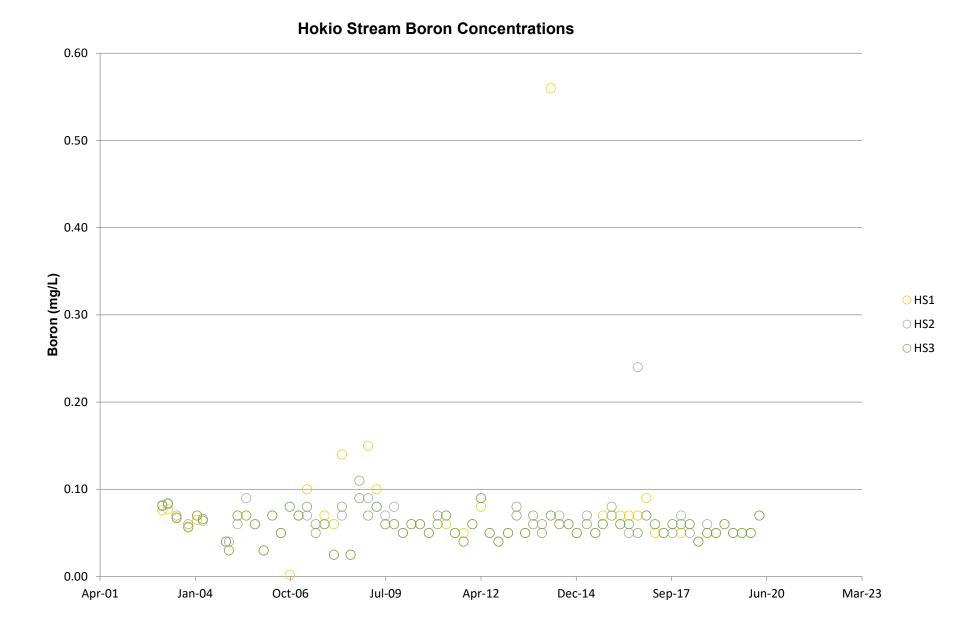
Irrigation Area Chloride Concentrations

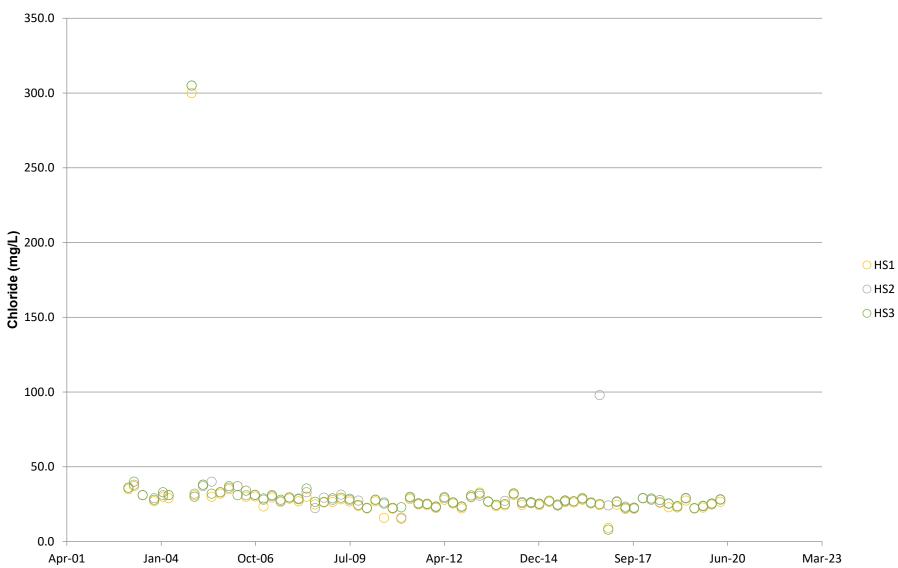


Irrigation Area Ammoniacal-Nitrogen Concentrations

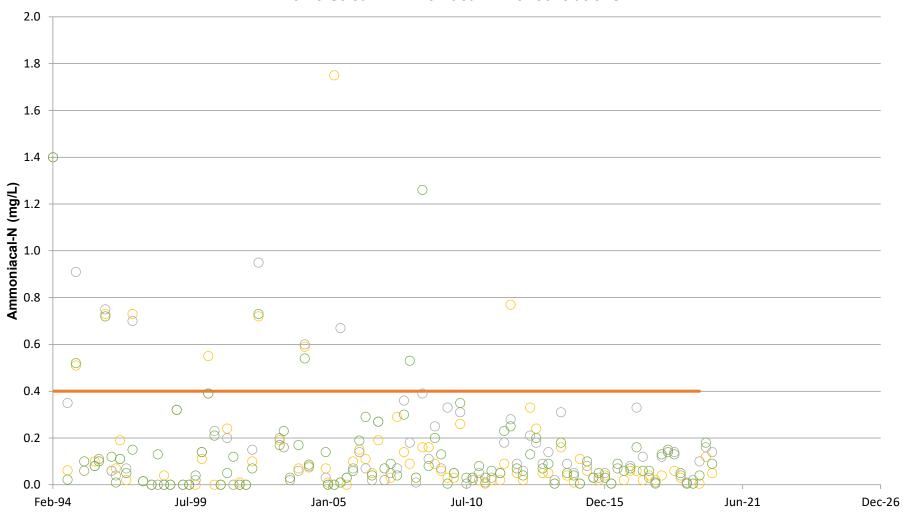


Irrigation Area Conductivity Levels



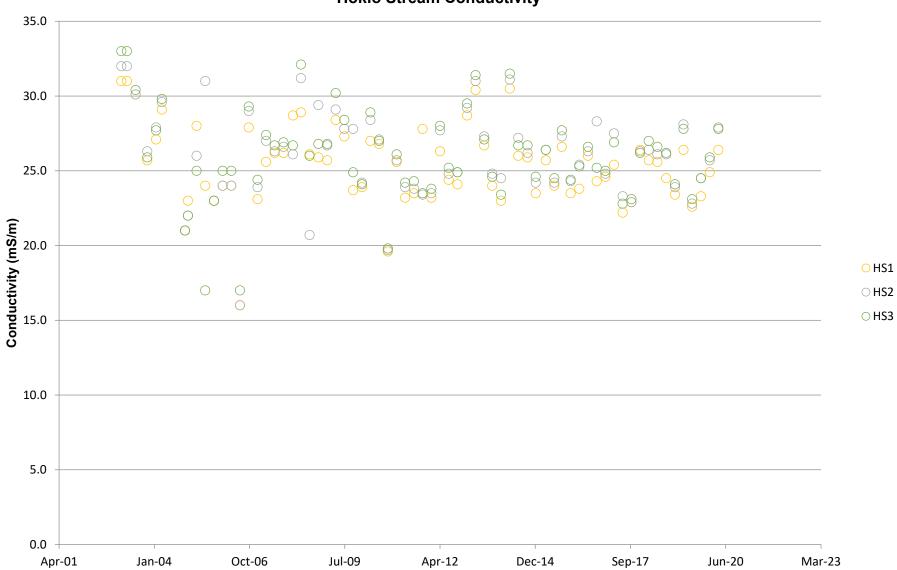


Hokio Stream Chloride Concentrations



Hokio Stream Ammoniacal-N Concentrations

○ HS1 ○ HS2 ○ HS3 — Horizons One Plan Standard



Hokio Stream Conductivity

Palmerston North

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

Please visit **www.stantec.com** to learn more about how Stantec design with community in mind.

