

File No.: 39630

22 January 2025

Sovereign Palms Ltd.
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Attention: Sean Monaghan

Email: monaghan@suburbanestates.co.nz

Dear Sean,

**TOPSOIL INVESTIGATION REPORT – STAGES 3A, 3B, 4, 4A, & 5 OAKBRIDGE SUBDIVISION
(SUBDIVISION OF LOT 4000 STAGE 2B RMA/2020/3053; LOT 100 RMA/2021/2570; AND
LOTS 4, 5 AND 6 DP 23089) – REVISION 4**

1.0 INTRODUCTION AND SCOPE

Soil sampling was undertaken within Stages 3a, 3b, 4, 4a, and 5 of the Oakbridge subdivision by Davis Ogilvie & Partners Limited (Davis Ogilvie) in July 2023 and November 2024, on behalf of Sovereign Palms Ltd. (RMA/2022/927 & varied by RMA/2022/927/A). The Oakbridge Subdivision is located on land with the previous address of 1 Selkirk Place and 47 Hawkins Road, Christchurch (herein referred to as the site). The soil sampling was completed to assess the recently placed topsoil across the site which previously contained trace elements at concentrations above background levels.

Davis Ogilvie previously completed a detailed site investigation (DSI) of the Oakbridge subdivision in 2017¹. The DSI found concentrations of heavy metals, organochlorine pesticides (OCPs) and polycyclic aromatic hydrocarbons (PAHs) at and above the adopted background criteria were present across the site. Specifically, copper was present at concentrations exceeding background over the majority of the subdivision area. DDT, arsenic, chromium, and zinc were also detected at concentrations above background in a number of samples in different locations around the subdivision.

¹ Davis Ogilvie report dated 26 May 2017; Detailed Site Investigation Report, Oakbridge, Reference 34300.

Hotspot areas with contaminants concentrations exceeding the National Environment Standard (NES) soil contaminant standard (SCS) for residential 10% produce (NESCO) have been remediated, and a validation report has been produced which is separate to this report. The subject of this report is the widespread, elevated copper concentrations within the topsoil. Following remediation of the hotspot areas, the original topsoil across the Oakbridge subdivision was stripped, stockpiled, and later respread as the final stage of earthworks development, therefore the topsoil is considered to be well mixed. A plan showing Stages 3a, 3b, 4, 4a, and 5 of the Oakbridge subdivision is shown in Figure 1.



Figure 1: Extract from the Oakbridge Scheme Plan – Stages 3-5 (overall plan) (DWG 350/H). Not to scale.

Soil samples were collected by Davis Ogilvie in April 2023 (Lots 121 – 230), November 2024 (Lots 231 – 246) and December 2024 (Lots 209 – 212). Results of the 2023 sampling were previously reported in Version 2 of this report. The samples were taken from the upper 100 to 150 mm of topsoil. The soil sampling methodology included the collection of approximately four samples per residential lot which were analysed for a suite of heavy metals. Composite samples (a combination of the four samples per lot) were created by the laboratory, and each composite sample was then analysed by the laboratory for organochlorine pesticides (OCPs). The results were compared to the NESCO for residential 10% produce and background levels established by Environment Canterbury (ECan)².

² ECan (2007). Background concentrations of selected trace elements in Canterbury Soils. Christchurch Gley and Recent Soils, Level 2-Table 2.

1.1 Assessment Methodology

The following investigation and assessment methodology was undertaken:

- Soil sample locations evenly distributed around each residential lot to gain a suitable representation of the topsoil.
- Visual and olfactory inspection of each sample for indicators of contamination.
- Soil samples were collected directly by hand and from ground surface to a depth of 150 mm below existing ground level (EGL).
- To reduce the potential for cross contamination, each sample was collected using disposable nitrile gloves that were discarded following the collection of each sample.
- All field work and sampling were undertaken in general accordance with the procedures for the appropriate handling of potentially contaminated soils as described in the MfE Contaminated Land Management Guidelines No.5: Site Investigation and Analysis of Soils.
- All samples were placed in laboratory supplied containers, which were then sealed, labelled with a unique identifier, and placed in chilled containers prior to transportation to the laboratory.
- Approximately four individual soil samples were taken per lot. All samples on each lot were subsequently composited by the laboratory and analysis was undertaken on that composited sample.
- Samples were transported to Hill Labs under the standard chain of custody procedures for laboratory analysis of potential contaminants of concern.
- Following receipt of the samples by Hill Labs, selected soil samples were scheduled for a selection of analytes including heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn) and Organochlorine Pesticides (OCPs).
- Assessment of soil concentrations for contaminants of concern with applicable standards and soil acceptance criteria for the protection of human health and the environment.

The residential lots that were sampled are shown in Figure 2 (2023 in yellow and 2024 in green).



Figure 2: Modified extract from the Oakbridge Scheme Plan – Stages 3-5 (overall plan) (DWG 350/H) showing sampled areas as part of this investigation. Sampling was undertaken in lots shaded in green. Yellow shaded lots have previously been investigated (April 2023, first reported in July 2023).

2.0 REGULATORY FRAMEWORK AND ASSESSMENT CRITERIA

The NES for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations under the Resource Management Act (1991) came into effect on 1 January 2012. The NES Regulations apply to all land where a detailed site investigation exists that demonstrates that any contaminants in or on the piece of land are above background concentrations. The Davis Ogilvie (May 2017) DSI³ identified (summary of contaminants) to be consistently present in the topsoil across the site.

An assessment of topsoil present on site was completed to evaluate the topsoil concentrations post stripping, stockpiling, and re-spreading to ensure suitable for residential land use and to evaluate possible NES Regulation and soil disposal implications for future landowners.

³ Davis Ogilvie report dated 26 May 2017: Detailed Site Investigation Report, Oakbridge, Reference 34300

The NES introduced 12 soil contaminant standards (SCSs) for priority contaminants for the protection of human health in a variety of land use scenarios. The NES requires that the Contaminated Land Management Guideline No.2 – Hierarchy and Application in New Zealand of Environmental Guideline Values be used where an NES SCS is not available. The ‘Residential 10%’ land use scenario has been adopted in this assessment.

Background levels for metal concentrations in soils in the area were obtained from ECan online GIS – Trace Level 2 concentrations. The values for the Regional GLEY and RECENT soil groups were adopted.

3.0 ANALYTICAL RESULTS

Laboratory reports are attached to this letter as are the assessment tables with results tabulated and compared against the relevant assessment criteria. The analytical results can be summarised as follows:

- The concentrations of tested heavy metals and OCPs did not exceed the National Environmental Standard for Soil Contamination (NESCS) residential guideline value (10% produce).
- Copper concentrations (18 to 104 mg/kg) frequently exceed established soil background levels for this area (20.3 mg/kg).
- Approximately a fifth of samples exceed the zinc background level of 93.94 mg/kg.
- OCP concentrations do not exceed ambient concentrations, as defined by the MfE⁴. None of the analysed OCP concentrations exceed the NESCS residential guideline value (10% produce).
- Nine topsoil samples show chromium concentrations slightly exceeding background levels with concentrations in excess are 23 mg/kg, versus a background level for this area of 22.7 mg/kg. However, only 9 of the 111 sampled lots contained chromium at a concentration of 23 mg/kg.
- Arsenic concentrations exceed background levels within 2 of the 168 samples (13 and 16 mg/kg, compared to a background level of 12.58 mg/kg), however the majority of lots across the subdivision contain arsenic concentrations below background levels (12.58 mg/kg).
- Composite sample results for Lots 133, 136 and 161 showed heavy metal and OCP concentrations below the background levels, and therefore topsoil on these lots can be considered as ‘cleanfill’.

Canterbury Maps shows a boundary between two different background levels crossing the subdivision: these are ‘GLEY’ and ‘RECENT’. The background levels for these two soil types are provided in the ECan 2007 background concentrations report⁵. Both GLEY (n = 6) and RECENT (n = 18) background levels are shown on Table 1. However, since all topsoil on site has been stockpiled, respread, and therefore mixed, it is not appropriate to compare the results spatially and the results have been compared to the highest background level RECENT.

⁴ MfE (1998) Ambient concentrations of selected organochlorines in soils.

⁵ ECan (2007). Background concentrations of selected trace elements in Canterbury Soils. Christchurch Gley Recent Soils, Level 2-Table 2.

3.1 Quality Assurance and Quality Control

The quality assurance / quality control (QA / QC) procedures undertaken during the works included:

- All fieldwork was managed by a Suitably Qualified and Experienced Practitioner (SQEP) and this report has been reviewed by a SQEP, as required by the National Environmental Standard for Soil Contamination (NESCS).
- The use of standard sample registers and chain of custody records for all samples.
- Each soil sample was given a unique identification number, which consisted of a project number, lot number location and sample identifier (e.g., 231_1 to 4, denoting lot number and sample number per lot). In addition, the sample date was also included. Each composite sample was named with the lot number the samples were obtained from.
- All analysis was completed by Hill Laboratories who are an International Accredited New Zealand (IANZ) laboratory.

4.0 CONCLUSIONS

On the basis of the topsoil sampling results across Stages 3a, 3b, 4, 4a, and 5, it is considered that the topsoil is suitable for residential land use and that the risk to human health is acceptable. However, as heavy metal results for copper are consistently in excess of background levels, the topsoil on site does not meet the definition of 'cleanfill'. Topsoil that leaves site must be taken to an accredited facility authorised to receive it.

According to the NES Regulations (8.3), the expected soil disturbance / removal volumes associated with the residential development of each lot is likely to exceed the criteria for a permitted activity and a resource consent is required to do so.

A Global consent (RMA/2023/1945) for the removal of contaminated soil has been obtained by Suburban Estates from CCC to remove the soil from the applicable lots. The site management plan required as a condition of this global resource consent should be followed when soil disturbance and / or removal volumes exceed the permitted activity allowance.

5.0 CLOSURE

Please contact the undersigned should you have any questions.

Yours faithfully,

DAVIS OGILVIE & PARTNERS LTD.



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Oakbridge Stages 3 - 5: Soil Analytical Results - Tables 1 - 9

Laboratory Results

Limitations

This report has been prepared on the specific instructions of Sovereign Palms Ltd. Only Sovereign Palms Ltd. and the Local and Regional Territorial Authorities are entitled to rely upon this report. Davis Ogilvie & Partners Ltd. accepts no liability to anyone other than Sovereign Palms Ltd. in any way in relation to this report and the content of it and any direct or indirect effect this report may have. No warranty is included—either expressed or implied—that the actual conditions will conform to the assessments contained in this report. Davis Ogilvie & Partners Ltd. does not consider anyone else relying on this report or that it will be used for any other purpose.

Table 2: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Depth (m)			Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23
Sample Date			3260600.257	3260600.258	3260600.259	3260600.26	3260600.261	3260600.262	3260600.263	3260600.264	3260600.265	3260600.266	3260600.267	3260600.268	3260600.269	3260600.27	3260600.271
Laboratory sample number																	
Organochlorine Pesticides in Soil (mg/kg dry wt)																	
Aldrin	-	0.029 ⁷	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
alpha-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
beta-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
delta-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
gamma-BHC (Lindane)	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
cis-Chlordane	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
trans-Chlordane	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
2,4'-DDD	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
4,4'-DDD	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
2,4'-DDE	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
4,4'-DDE	0.23	-	< 0.013	< 0.013	< 0.013	< 0.012	0.017	0.03	0.03	0.02	0.018	0.028	0.02	0.02	< 0.012	< 0.012	0.02
2,4'-DDT	0.0235	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
4,4'-DDT	0.172	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	0.02
Total DDT Isomers	0.431	70	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	0.00131	2.6	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endosulfan I	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endosulfan II	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endosulfan sulphate	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endrin	-	18 ⁷	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endrin aldehyde	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endrin ketone	-	-	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Heptachlor	-	0.10 ⁸	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Heptachlor epoxide	-	0.05 ⁷	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Hexachlorobenzene	-	0.3 ⁷	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Methoxychlor	-	310 ⁷	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013

1. MIE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to residential land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Residential land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/industrial land use, sand soil type, surface (<1 m) contamination.

7. Regional Screening Levels for Chemical Contaminants at Superfund Sites (US EPA regions 3, 6 and 9 (accessed Oct 2012)

8. Supplemental Guidance for Developing Soil Screening Levels at Superfund Sites (US EPA, 2021)

BOLD Value exceeds the adopted ambient concentration
 < Value below the laboratory limit of detection
 - Value Not Available

Table 3: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	136	150	151	152	153	160	161	162	163	164	165	166	167	168	169
			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Depth (m)			Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23
Sample Date			3260600.272	3260600.273	3260600.274	3260600.275	3260600.276	3260600.277	3260600.278	3260600.279	3260600.28	3260600.281	3260600.282	3260600.283	3260600.284	3260600.285	3260600.286
Laboratory sample number																	
Organochlorine Pesticides in Soil (mg/kg dry wt)																	
Aldrin	-	0.029 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
alpha-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
beta-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
delta-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
gamma-BHC (Lindane)	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
cis-Chlordane	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
trans-Chlordane	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
2,4'-DDD	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
4,4'-DDD	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
2,4'-DDE	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
4,4'-DDE	0.23	-	< 0.013	0.023	0.019	< 0.013	< 0.013	0.01	0.03	0.02	0.03	0.019	0.015	0.03	0.03	0.02	0.016
2,4'-DDT	0.0235	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
4,4'-DDT	0.172	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	0.025	< 0.013	< 0.013	< 0.014	< 0.014
Total DDT Isomers	0.431	70	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	0.00131	2.6	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endosulfan I	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endosulfan II	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endosulfan sulphate	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endrin	-	18 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endrin aldehyde	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endrin ketone	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Heptachlor	-	0.10 ⁸	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Heptachlor epoxide	-	0.05 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Hexachlorobenzene	-	0.3 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Methoxychlor	-	310 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014

1. MIE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to residential land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Residential land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/Industrial land use, sand soil type, surface (<1 m) contamination.

BOLD Value exceeds the adopted ambient concentration
 < Value below the laboratory limit of detection
 - Value Not Available

Table 4: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	
Sample Depth (m)			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Date			Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23
Laboratory sample number			3260600.287	3260600.288	3260600.289	3260600.29	3260600.291	3260600.292	3260600.293	3260600.294	3260600.295	3260600.296	3260600.297	3260600.298	3260600.299	3260600.299	3260600.3	3260600.301
Organochlorine Pesticides in Soil (mg/kg dry wt)																		
Aldrin	-	0.029 ⁷	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
alpha-BHC	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
beta-BHC	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
delta-BHC	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
gamma-BHC (Lindane)	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
cis-Chlordane	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
trans-Chlordane	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
2,4'-DDD	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
4,4'-DDD	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
2,4'-DDE	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
4,4'-DDE	0.23	-	0.014	0.018	0.017	< 0.013	0.017	0.022	0.013	0.016	< 0.013	0.023	0.015	0.015	0.018	< 0.013	< 0.014	
2,4'-DDT	0.0235	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
4,4'-DDT	0.172	-	< 0.013	< 0.013	0.016	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.014	< 0.013	< 0.014	< 0.013	0.015	< 0.013	< 0.014	
Total DDT Isomers	0.431	70	< 0.08	< 0.08	< 0.07	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	
Dieldrin	0.00131	2.6	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Endosulfan I	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Endosulfan II	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Endosulfan sulphate	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Endrin	-	18 ⁷	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Endrin aldehyde	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Endrin ketone	-	-	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Heptachlor	-	0.10 ⁸	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Heptachlor epoxide	-	0.05 ⁷	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Hexachlorobenzene	-	0.3 ⁷	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	
Methoxychlor	-	310 ⁷	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014	

1. MIE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to residential land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Residential land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/industrial land use, sand soil type, surface (<1 m) contamination.

BOLD Value exceeds the adopted ambient concentration
 < Value below the laboratory limit of detection
 - Value Not Available

Table 5: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	185	186	187	188	189	190	191	192	193	194	195	196	197	198	213	
Sample Depth (m)			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Date			Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23
Laboratory sample number			3260600.302	3260600.303	3260600.304	3260600.305	3260600.306	3260600.307	3260600.308	3260600.309	3260600.31	3260600.311	3260600.312	3260600.313	3260600.314	3260600.315	3260600.316	
Organochlorine Pesticides in Soil (mg/kg dry wt)																		
Aldrin	-	0.029 ⁷	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
alpha-BHC	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
beta-BHC	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
delta-BHC	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
gamma-BHC (Lindane)	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
cis-Chlordane	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
trans-Chlordane	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
2,4'-DDD	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
4,4'-DDD	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
2,4'-DDE	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
4,4'-DDE	0.23	-	0.027	< 0.013	0.016	0.018	0.029	0.014	0.044	0.017	0.018	0.044	0.014	0.03	0.019	0.017	0.025	
2,4'-DDT	0.0235	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
4,4'-DDT	0.172	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	0.017	< 0.012	< 0.013	0.018	< 0.013	0.02	0.013	< 0.013	< 0.013	
Total DDT Isomers	0.431	70	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	
Dieldrin	0.00131	2.6	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endosulfan I	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endosulfan II	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endosulfan sulphate	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endrin	-	18 ⁷	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endrin aldehyde	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endrin ketone	-	-	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Heptachlor	-	0.10 ⁸	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Heptachlor epoxide	-	0.05 ⁷	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Hexachlorobenzene	-	0.3 ⁷	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Methoxychlor	-	310 ⁷	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	

1. MIE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to residential land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Residential land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/Industrial land use, sand soil type, surface (<1 m) contamination.

BOLD Value exceeds the adopted ambient concentration
 < Value below the laboratory limit of detection
 - Value Not Available

Table 6: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	214	215	216	217	218	219	220	221	222	223	224	225	228	229	230	
Sample Depth (m)			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Date			Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23
Laboratory sample number			3260600.317	3260600.318	3260600.319	3260600.32	3256371.550	3256371.490	3256371.59	3256371.500	3256371.6	3256371.540	3256371.530	3256371.520	3256371.61	3256371.63	3256371.510	
Organochlorine Pesticides in Soil (mg/kg dry wt)																		
Aldrin	-	0.029 ⁷	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
alpha-BHC	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
beta-BHC	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
delta-BHC	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
gamma-BHC (Lindane)	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
cis-Chlordane	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
trans-Chlordane	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
2,4'-DDD	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
4,4'-DDD	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
2,4'-DDE	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
4,4'-DDE	0.23	-	0.016	0.017	0.017	0.031	0.04	0.026	0.025	0.03	0.016	0.015	0.032	0.022	0.028	0.019	0.017	
2,4'-DDT	0.0235	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
4,4'-DDT	0.172	-	< 0.014	< 0.013	0.021	0.023	0.017	< 0.013	< 0.018	0.014	< 0.013	< 0.012	0.015	< 0.013	< 0.013	< 0.013	< 0.013	
Total DDT Isomers	0.431	70	< 0.08	< 0.08	< 0.08	< 0.08	< 0.09	< 0.08	< 0.11	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	
Dieldrin	0.00131	2.6	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endosulfan I	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endosulfan II	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endosulfan sulphate	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endrin	-	18 ⁷	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endrin aldehyde	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Endrin ketone	-	-	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Heptachlor	-	0.10 ⁸	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Heptachlor epoxide	-	0.05 ⁷	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Hexachlorobenzene	-	0.3 ⁷	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Methoxychlor	-	310 ⁷	< 0.014	< 0.013	< 0.013	< 0.014	< 0.014	< 0.013	< 0.018	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	

1. MIE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to residential land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Residential land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/Industrial land use, sand soil type, surface (<1 m) contamination.

BOLD Value below the laboratory limit of detection
 < Value below the laboratory limit of detection
 - Value Not Available

Table 7: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential Land Use Scenario	247	248	249	250	251	252	254 -3	154	155	156	157	158	159	
Sample Depth (m)			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Date			Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Apr-23	Aug-23	Aug-23	Aug-23	Aug-23	Aug-23	Aug-23	
Laboratory sample number			3256371.58	3256371.64	3256371.480	3256371.62	3256371.560	3256371.570	3256371.230	3340778.25	3340778.26	3340778.270	3340778.28	3340778.290	3340778.300	
Organochlorine Pesticides in Soil (mg/kg dry wt)																
Aldrin	-	0.029 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
alpha-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
beta-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
delta-BHC	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
gamma-BHC (Lindane)	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
cis-Chlordane	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
trans-Chlordane	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
2,4'-DDD	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
4,4'-DDD	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
2,4'-DDE	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
4,4'-DDE	0.23	-	0.032	0.04	0.03	0.036	0.025	0.047	0.015	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
2,4'-DDT	0.0235	-	< 0.013	< 0.013	< 0.013	0.03	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
4,4'-DDT	0.172	-	< 0.013	0.013	0.013	0.132	0.014	0.019	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Total DDT Isomers	0.431	70	< 0.08	< 0.08	< 0.08	0.21	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.09	< 0.08	< 0.08
Dieldrin	0.00131	2.6	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Endosulfan I	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Endosulfan II	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Endosulfan sulphate	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Endrin	-	18 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Endrin aldehyde	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Endrin ketone	-	-	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Heptachlor	-	0.10 ⁸	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Heptachlor epoxide	-	0.05 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Hexachlorobenzene	-	0.3 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013
Methoxychlor	-	310 ⁷	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013	< 0.013

1. MIE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to residential land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Residential land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/industrial land use, sand soil type, surface (<1 m) contamination.

BOLD Value exceeds the adopted ambient concentration
 < Value below the laboratory limit of detection
 - Value Not Available

Table 8: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630																			
Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	
Sample Depth (m)			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Date			Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24	Nov-24
Laboratory sample number			3719366.64	3719366.65	3719366.66	3719366.67	3719366.68	3719366.69	3719366.7	3719366.71	3719366.72	3719366.73	3719366.74	3719366.75	3719366.76	3719366.77	3719366.78	3719366.79	
Organochlorine Pesticides in Soil (mg/kg dry wt)																			
Aldrin	-	0.029 ⁷	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
alpha-BHC	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
beta-BHC	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
delta-BHC	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
gamma-BHC (Lindane)	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
cis-Chlordane	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
trans-Chlordane	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
2,4'-DDD	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
4,4'-DDD	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
2,4'-DDE	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
4,4'-DDE	0.23	-	0.029	0.018	0.024	0.017	0.021	0.04	0.02	0.02	0.022	0.024	0.03	0.042	0.03	0.028	0.03	0.05	0.05
2,4'-DDT	0.0235	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
4,4'-DDT	0.172	-	0.014	<0.011	0.013	<0.011	<0.012	<0.011	<0.011	0.02	0.013	0.014	0.02	0.021	0.02	0.015	0.02	0.04	0.04
Total DDT Isomers	0.431	70	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.07	<0.07	<0.07	<0.07	<0.07	0.08
Dieldrin	0.0031	2.6	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Endosulfan I	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Endosulfan II	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Endosulfan sulphate	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Endrin	-	18 ⁷	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Endrin aldehyde	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Endrin ketone	-	-	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Heptachlor	-	0.10 ⁸	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Heptachlor epoxide	-	0.05 ⁷	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Hexachlorobenzene	-	0.3 ⁷	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Methoxychlor	-	310 ⁷	<0.011	<0.011	<0.012	<0.011	<0.012	<0.011	<0.011	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012

1. MfE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to commercial or industrial land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Commercial/Industrial (D) land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/industrial land use, sand soil type, surface (<1 m) contamination.

7. Regional Screening Levels for Chemical Contaminants at Superfund Sites (US EPA regions 3, 6 and 9 (accessed Oct 2012))

8. Supplemental Guidance for Developing Soil Screening Levels at Superfund Sites (US EPA, 2021)

BOLD Value exceeds the adopted background concentration
 < Value below the laboratory limit of detection
 - Value Not Available

Table 9: Oakbridge Stages 3 to 5: Soil Analytical Results (Organochlorine Pesticides) - 39630

Lot No.	Ambient Concentrations ¹	NES:CS SCS for Residential (10%) Land Use Scenario	209	210	211	212
Sample Depth (m)			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
Sample Date			Dec-24	Dec-24	Dec-24	Dec-24
Laboratory sample number			3744918.17	3744918.18	3744918.19	3744918.2
Organochlorine Pesticides in Soil (mg/kg dry wt)						
Aldrin	-	0.029 ⁷	< 0.012	< 0.012	< 0.012	< 0.012
alpha-BHC	-	-	< 0.012	< 0.012	< 0.012	< 0.012
beta-BHC	-	-	< 0.012	< 0.012	< 0.012	< 0.012
delta-BHC	-	-	< 0.012	< 0.012	< 0.012	< 0.012
gamma-BHC (Lindane)	-	-	< 0.012	< 0.012	< 0.012	< 0.012
cis-Chlordane	-	-	< 0.012	< 0.012	< 0.012	< 0.012
trans-Chlordane	-	-	< 0.012	< 0.012	< 0.012	< 0.012
2,4'-DDD	-	-	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDD	-	-	< 0.012	< 0.012	< 0.012	< 0.012
2,4'-DDE	-	-	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDE	0.23	-	0.031	0.04	0.037	0.043
2,4'-DDT	0.0235	-	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDT	0.172	-	0.012	0.016	0.015	0.015
Total DDT Isomers	0.431	70	< 0.07	< 0.07	< 0.07	< 0.07
Dieldrin	0.0031	2.6	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan I	-	-	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan II	-	-	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan sulphate	-	-	< 0.012	< 0.012	< 0.012	< 0.012
Endrin	-	18 ⁷	< 0.012	< 0.012	< 0.012	< 0.012
Endrin aldehyde	-	-	< 0.012	< 0.012	< 0.012	< 0.012
Endrin ketone	-	-	< 0.012	< 0.012	< 0.012	< 0.012
Heptachlor	-	0.10 ⁸	< 0.012	< 0.012	< 0.012	< 0.012
Heptachlor epoxide	-	0.05 ⁷	< 0.012	< 0.012	< 0.012	< 0.012
Hexachlorobenzene	-	0.3 ⁷	< 0.012	< 0.012	< 0.012	< 0.012
Methoxychlor	-	310 ⁷	< 0.012	< 0.012	< 0.012	< 0.012

1. MfE (1998) Ambient concentrations of selected organochlorines in soils.

2. Resource Management (National Environmental Standard for Assessing and managing Contaminants in Soil to Protect Human Health) Regulation 2012 (NES:CS) - Soil contaminant standards (SCS) applicable to commercial or industrial land use have been selected.

3. National Environment Protection Council (NEPC) (2013). National Environmental Protection Measure (Assessment of Site Contamination) as amended in 2013 Schedule B1, Health Investigation Levels (HIL) for soil contaminants based on Commercial/Industrial (D) land use. Table 1A (1).

4. Assumes soil pH of 5.

5. Criteria for Chromium VI were conservatively selected.

6. Ministry for the Environment, 1999 revised 2011. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Module 4 - Tier 1 Soil Screening Criteria. Commercial/Industrial land use, sand soil type, surface (<1 m) contamination.

7. Regional Screening Levels for Chemical Contaminants at Superfund Sites (US EPA regions 3, 6 and 9 (accessed Oct 2012)

8. Supplemental Guidance for Developing Soil Screening Levels at Superfund Sites (US EPA, 2021)

BOLD Value exceeds the adopted background concentration
 < Value below the laboratory limit of detection
 - Value Not Available



Certificate of Analysis

Client:	Davis Ogilvie & Partners Limited	Lab No:	3256371	SPV1
Contact:	Gareth Oddy C/- Davis Ogilvie & Partners Limited PO Box 589 Addington Christchurch 8140	Date Received:	26-Apr-2023	
		Date Reported:	22-May-2023	
		Quote No:	123490	
		Order No:		
		Client Reference:	39630	
		Add. Client Ref:	Stage 5B	
		Submitted By:	Gareth Oddy	

Sample Type: Soil

Sample Name:	39630 254-3 20-Apr-2023	Composite of 39630 249-1, 249-2, 249-4[A] and 249[B]	Composite of 39630 219-1, 219-2, 219-3 and 219-4	Composite of 39630 221-1, 221-2 and 221-4	Composite of 39630 230-1, 230-3 and 230-4
Lab Number:	3256371.23	3256371.48	3256371.49	3256371.50	3256371.51

Individual Tests

Dry Matter	g/100g as rcvd	74	78	81	78	78
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Heavy Metals with Mercury, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	10	9	9	11	11
Total Recoverable Cadmium	mg/kg dry wt	0.15	0.15	0.10	0.17	0.11
Total Recoverable Chromium	mg/kg dry wt	21	20	19	19	21
Total Recoverable Copper	mg/kg dry wt	30	75	33	66	27
Total Recoverable Lead	mg/kg dry wt	29	39	22	26	28
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	17	15	16	18
Total Recoverable Zinc	mg/kg dry wt	98	114	75	96	90

Organochlorine Pesticides Screening in Soil

Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.015	0.030	0.026	0.030	0.017
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	0.014	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil						
Sample Name:	39630 254-3 20-Apr-2023	Composite of 39630 249-1, 249-2, 249-4[A] and 249[B]	Composite of 39630 219-1, 219-2, 219-3 and 219-4	Composite of 39630 221-1, 221-2 and 221-4	Composite of 39630 230-1, 230-3 and 230-4	
Lab Number:	3256371.23	3256371.48	3256371.49	3256371.50	3256371.51	
Organochlorine Pesticides Screening in Soil						
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Sample Name:	Composite of 39630 225-2 and 225-4	Composite of 39630 224-1 and 224-3	Composite of 39630 223-2, 223-3 and 223-4	Composite of 39630 218-2 and 218-4	Composite of 39630 251-2, 251-3 and 251-4	
Lab Number:	3256371.52	3256371.53	3256371.54	3256371.55	3256371.56	
Individual Tests						
Dry Matter	g/100g as rcvd	78	78	80	71	81
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	9	10	10	6
Total Recoverable Cadmium	mg/kg dry wt	0.13	0.12	0.13	0.11	0.14
Total Recoverable Chromium	mg/kg dry wt	19	21	19	21	16
Total Recoverable Copper	mg/kg dry wt	104	81	50	26	24
Total Recoverable Lead	mg/kg dry wt	24	28	27	26	23
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	15	17	17	16	13
Total Recoverable Zinc	mg/kg dry wt	98	90	88	83	112
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
4,4'-DDE	mg/kg dry wt	0.022	0.032	0.015	0.040	0.025
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	0.015	< 0.012	0.017	0.014
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.09	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.014	< 0.013
Sample Name:	Composite of 39630 252-2 and 252-4	Composite of 39630 247-1 and 247-2	Composite of 39630 220-1, 220-2, 220-3 and 220-4	Composite of 39630 222-2, 222-3 and 222-4	Composite of 39630 228-2, 228-3 and 228-4	
Lab Number:	3256371.57	3256371.58	3256371.59	3256371.60	3256371.61	
Individual Tests						
Dry Matter	g/100g as rcvd	79	79	56	80	80
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	10	8	7	8
Total Recoverable Cadmium	mg/kg dry wt	0.15	0.11	0.10	0.10	0.14
Total Recoverable Chromium	mg/kg dry wt	16	20	18	17	18

Sample Type: Soil

Sample Name:	Composite of 39630 252-2 and 252-4	Composite of 39630 247-1 and 247-2	Composite of 39630 220-1, 220-2, 220-3 and 220-4	Composite of 39630 222-2, 222-3 and 222-4	Composite of 39630 228-2, 228-3 and 228-4
Lab Number:	3256371.57	3256371.58	3256371.59	3256371.60	3256371.61

Heavy Metals with Mercury, Screen Level						
Total Recoverable Copper	mg/kg dry wt	30	43	41	56	44
Total Recoverable Lead	mg/kg dry wt	26	27	22	20	26
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	14	18	15	14	15
Total Recoverable Zinc	mg/kg dry wt	110	87	74	73	93

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.047	0.032	0.025	0.016	0.028
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	0.019	< 0.013	< 0.018	< 0.013	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.11	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.018	< 0.013	< 0.013

Sample Name:	Composite of 39630 250-1 and 250-3	Composite of 39630 229-1 and 229-3	Composite of 39630 248-3 and 248-4
Lab Number:	3256371.62	3256371.63	3256371.64

Individual Tests				
Dry Matter	g/100g as rcvd	78	76	78

Heavy Metals with Mercury, Screen Level				
Total Recoverable Arsenic	mg/kg dry wt	9	10	8
Total Recoverable Cadmium	mg/kg dry wt	0.15	0.10	0.13
Total Recoverable Chromium	mg/kg dry wt	20	21	20
Total Recoverable Copper	mg/kg dry wt	40	28	43
Total Recoverable Lead	mg/kg dry wt	26	28	25
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	17	17	16
Total Recoverable Zinc	mg/kg dry wt	93	89	88

Organochlorine Pesticides Screening in Soil				
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013

Sample Type: Soil				
Sample Name:	Composite of 39630 250-1 and 250-3	Composite of 39630 229-1 and 229-3	Composite of 39630 248-3 and 248-4	
Lab Number:	3256371.62	3256371.63	3256371.64	
Organochlorine Pesticides Screening in Soil				
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.036	0.019	0.040
2,4'-DDT	mg/kg dry wt	0.030	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	0.132	< 0.013	0.013
Total DDT Isomers	mg/kg dry wt	0.21	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%.	-	23, 48-64
Heavy Metals with Mercury, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	23, 48-64
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	23, 48-64
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	23, 48-64
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-22, 24-47

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 16-May-2023 and 22-May-2023. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental



Certificate of Analysis

Client:	Davis Ogilvie & Partners Limited	Lab No:	3260600	SPV3
Contact:	Gareth Oddy C/- Davis Ogilvie & Partners Limited PO Box 589 Addington Christchurch 8140	Date Received:	29-Apr-2023	
		Date Reported:	12-May-2023	
		Quote No:	123490	
		Order No:		
		Client Reference:	39630	
		Submitted By:	Chavvah Freeman	

Sample Type: Soil

Sample Name:	Composite of 39630 121-1, 121-2, 121-3 and 121-4	Composite of 39630 122-2, 122-3 and 122-4	Composite of 39630 123-1, 123-2, 123-3 and 123-4	Composite of 39630 124-1, 124-2, 124-3 and 124-4	Composite of 39630 125-1, 125-2, 125-3 and 125-4
Lab Number:	3260600.257	3260600.258	3260600.259	3260600.260	3260600.261

Individual Tests

Dry Matter	g/100g as rcvd	77	78	79	80	77
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Heavy Metals with Mercury, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	9	9	10	8	11
Total Recoverable Cadmium	mg/kg dry wt	0.13	0.11	< 0.10	< 0.10	0.14
Total Recoverable Chromium	mg/kg dry wt	19	19	18	18	21
Total Recoverable Copper	mg/kg dry wt	37	35	39	40	40
Total Recoverable Lead	mg/kg dry wt	25	25	24	23	29
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	15	15	14	14	17
Total Recoverable Zinc	mg/kg dry wt	76	75	67	65	116

Organochlorine Pesticides Screening in Soil

Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
4,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	0.017
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.012	< 0.013



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Sample Type: Soil

Sample Name:	Composite of 39630 126-1, 126-2, 126-3 and 126-4	Composite of 39630 127-1, 127-2, 127-3 and 127-4	Composite of 39630 128-1, 128-2, 128-3 and 128-4	Composite of 39630 129-1, 129-2, 129-3 and 129-4	Composite of 39630 130-1, 130-2, 130-3 and 130-4
Lab Number:	3260600.262	3260600.263	3260600.264	3260600.265	3260600.266

Individual Tests						
Dry Matter	g/100g as rcvd	77	79	80	77	78
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	9	8	11	11
Total Recoverable Cadmium	mg/kg dry wt	0.13	< 0.10	< 0.10	0.11	< 0.10
Total Recoverable Chromium	mg/kg dry wt	22	19	18	22	22
Total Recoverable Copper	mg/kg dry wt	33	21	21	24	23
Total Recoverable Lead	mg/kg dry wt	27	24	21	31	28
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	16	16	20	19
Total Recoverable Zinc	mg/kg dry wt	85	76	70	91	86

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.025	0.025	0.024	0.018	0.028
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013

Sample Name:	Composite of 39630 131-1, 131-2, 131-3 and 131-4	Composite of 39630 132-1, 132-2, 132-3 and 132-4	Composite of 39630 133-1, 133-2, 133-3 and 133-4	Composite of 39630 134-1, 134-2, 134-3 and 134-4	Composite of 39630 135-1, 135-2, 135-3 and 135-4
Lab Number:	3260600.267	3260600.268	3260600.269	3260600.270	3260600.271

Individual Tests						
Dry Matter	g/100g as rcvd	77	78	82	83	77
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	16	10	7	6	11
Total Recoverable Cadmium	mg/kg dry wt	0.19	< 0.10	< 0.10	< 0.10	0.12
Total Recoverable Chromium	mg/kg dry wt	23	20	17	16	22
Total Recoverable Copper	mg/kg dry wt	57	32	20	23	26
Total Recoverable Lead	mg/kg dry wt	28	24	18.9	18.2	29
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	16	14	14	20
Total Recoverable Zinc	mg/kg dry wt	128	82	61	64	92

Sample Type: Soil						
Sample Name:	Composite of 39630 131-1, 131-2, 131-3 and 131-4	Composite of 39630 132-1, 132-2, 132-3 and 132-4	Composite of 39630 133-1, 133-2, 133-3 and 133-4	Composite of 39630 134-1, 134-2, 134-3 and 134-4	Composite of 39630 135-1, 135-2, 135-3 and 135-4	
Lab Number:	3260600.267	3260600.268	3260600.269	3260600.270	3260600.271	
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
4,4'-DDE	mg/kg dry wt	0.016	0.020	< 0.012	< 0.012	0.018
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	0.022
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.012	< 0.013

Sample Name:	Composite of 39630 136-1, 136-2, 136-3 and 136-4	Composite of 39630 150-1, 150-2, 150-3 and 150-4	Composite of 39630 151-1, 151-2, 151-3 and 151-4	Composite of 39630 152-1, 152-2, 152-3 and 152-4	Composite of 39630 153-1, 153-2, 153-3 and 153-4	
Lab Number:	3260600.272	3260600.273	3260600.274	3260600.275	3260600.276	
Individual Tests						
Dry Matter	g/100g as rcvd	78	79	77	76	76
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	9	10	11	10	9
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.13	0.11	0.12	0.10
Total Recoverable Chromium	mg/kg dry wt	20	20	22	21	20
Total Recoverable Copper	mg/kg dry wt	18	38	31	35	29
Total Recoverable Lead	mg/kg dry wt	25	31	29	29	25
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	17	17	18	18	17
Total Recoverable Zinc	mg/kg dry wt	77	108	98	99	86
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	< 0.013	0.023	0.019	< 0.013	< 0.013

Sample Type: Soil

Sample Name:	Composite of 39630 136-1, 136-2, 136-3 and 136-4	Composite of 39630 150-1, 150-2, 150-3 and 150-4	Composite of 39630 151-1, 151-2, 151-3 and 151-4	Composite of 39630 152-1, 152-2, 152-3 and 152-4	Composite of 39630 153-1, 153-2, 153-3 and 153-4
Lab Number:	3260600.272	3260600.273	3260600.274	3260600.275	3260600.276

Organochlorine Pesticides Screening in Soil					
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013

Sample Name:	Composite of 39630 160-1, 160-2, 160-3 and 160-4	Composite of 39630 161-1, 161-2, 161-3 and 161-4	Composite of 39630 162-1, 162-2, 162-3 and 162-4	Composite of 39630 163-1, 163-2, 163-3 and 163-4	Composite of 39630 164-1, 164-2, 164-3 and 164-4
Lab Number:	3260600.277	3260600.278	3260600.279	3260600.280	3260600.281

Individual Tests					
Dry Matter	g/100g as rcvd	81	79	79	76

Heavy Metals with Mercury, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	10	10	10	11
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	0.13
Total Recoverable Chromium	mg/kg dry wt	22	21	22	23
Total Recoverable Copper	mg/kg dry wt	22	18	21	27
Total Recoverable Lead	mg/kg dry wt	28	27	28	31
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	19	18	19	20
Total Recoverable Zinc	mg/kg dry wt	88	82	88	94

Organochlorine Pesticides Screening in Soil					
Aldrin	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.013	0.027	0.017	0.028
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013

Sample Type: Soil						
Sample Name:		Composite of 39630 160-1, 160-2, 160-3 and 160-4	Composite of 39630 161-1, 161-2, 161-3 and 161-4	Composite of 39630 162-1, 162-2, 162-3 and 162-4	Composite of 39630 163-1, 163-2, 163-3 and 163-4	Composite of 39630 164-1, 164-2, 164-3 and 164-4
Lab Number:		3260600.277	3260600.278	3260600.279	3260600.280	3260600.281
Organochlorine Pesticides Screening in Soil						
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.012	< 0.013	< 0.013	< 0.013	< 0.013
Sample Name:		Composite of 39630 165-1, 165-2, 165-3 and 165-4	Composite of 39630 166-1, 166-2, 166-3 and 166-4	Composite of 39630 167-1, 167-2, 167-3 and 167-4	Composite of 39630 168-1, 168-2, 168-3 and 168-4	Composite of 39630 169-1, 169-2, 169-3 and 169-4
Lab Number:		3260600.282	3260600.283	3260600.284	3260600.285	3260600.286
Individual Tests						
Dry Matter	g/100g as rcvd	75	77	75	76	74
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	11	12	10	10	10
Total Recoverable Cadmium	mg/kg dry wt	0.11	0.13	0.12	0.12	0.17
Total Recoverable Chromium	mg/kg dry wt	22	23	22	22	22
Total Recoverable Copper	mg/kg dry wt	24	26	30	32	38
Total Recoverable Lead	mg/kg dry wt	30	31	29	29	32
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	20	20	19	19	19
Total Recoverable Zinc	mg/kg dry wt	90	96	95	94	116
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
4,4'-DDE	mg/kg dry wt	0.015	0.034	0.030	0.020	0.016
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
4,4'-DDT	mg/kg dry wt	0.025	< 0.013	< 0.013	< 0.014	< 0.014
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.014
Sample Name:		Composite of 39630 170-1, 170-2, 170-3 and 170-4	Composite of 39630 171-1, 171-2, 171-3 and 171-4	Composite of 39630 172-1, 172-2, 172-3 and 172-4	Composite of 39630 173-1, 173-2, 173-3 and 173-4	Composite of 39630 174-1, 174-2, 174-3 and 174-4
Lab Number:		3260600.287	3260600.288	3260600.289	3260600.290	3260600.291
Individual Tests						
Dry Matter	g/100g as rcvd	77	77	93	75	77

Sample Type: Soil

Sample Name:	Composite of 39630 170-1, 170-2, 170-3 and 170-4	Composite of 39630 171-1, 171-2, 171-3 and 171-4	Composite of 39630 172-1, 172-2, 172-3 and 172-4	Composite of 39630 173-1, 173-2, 173-3 and 173-4	Composite of 39630 174-1, 174-2, 174-3 and 174-4
Lab Number:	3260600.287	3260600.288	3260600.289	3260600.290	3260600.291

Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	11	10	11	9	10
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.12	0.11	0.12	0.12
Total Recoverable Chromium	mg/kg dry wt	23	19	20	19	21
Total Recoverable Copper	mg/kg dry wt	26	24	23	22	25
Total Recoverable Lead	mg/kg dry wt	29	25	27	26	28
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	20	17	18	17	18
Total Recoverable Zinc	mg/kg dry wt	89	93	92	87	85

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.014	0.018	0.017	< 0.013	0.017
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	0.016	< 0.013	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.07	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.011	< 0.013	< 0.013

Sample Name:	Composite of 39630 175-1, 175-2, 175-3 and 175-4	Composite of 39630 176-1, 176-2, 176-3 and 176-4	Composite of 39630 177-1, 177-2, 177-3 and 177-4	Composite of 39630 178-1, 178-2, 178-3 and 178-4	Composite of 39630 179-1, 179-2, 179-3 and 179-4
Lab Number:	3260600.292	3260600.293	3260600.294	3260600.295	3260600.296

Individual Tests						
Dry Matter	g/100g as rcvd	77	78	80	77	79

Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	11	10	8	10	9
Total Recoverable Cadmium	mg/kg dry wt	0.12	< 0.10	0.13	0.13	0.13
Total Recoverable Chromium	mg/kg dry wt	21	22	19	21	20
Total Recoverable Copper	mg/kg dry wt	25	22	32	39	38
Total Recoverable Lead	mg/kg dry wt	28	28	23	27	26
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	19	18	15	17	16
Total Recoverable Zinc	mg/kg dry wt	89	85	82	92	93

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013

Sample Type: Soil

Sample Name:		Composite of 39630 175-1, 175-2, 175-3 and 175-4	Composite of 39630 176-1, 176-2, 176-3 and 176-4	Composite of 39630 177-1, 177-2, 177-3 and 177-4	Composite of 39630 178-1, 178-2, 178-3 and 178-4	Composite of 39630 179-1, 179-2, 179-3 and 179-4
Lab Number:		3260600.292	3260600.293	3260600.294	3260600.295	3260600.296
Organochlorine Pesticides Screening in Soil						
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.022	0.013	0.016	< 0.013	0.023
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	0.014
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013

Sample Name:		Composite of 39630 180-1, 180-2, 180-3 and 180-4	Composite of 39630 181-1, 181-2, 181-3 and 181-4	Composite of 39630 182-1, 182-2, 182-3 and 182-4	Composite of 39630 183-1, 183-2, 183-3 and 183-4	Composite of 39630 184-1, 184-2, 184-3 and 184-4
Lab Number:		3260600.297	3260600.298	3260600.299	3260600.300	3260600.301

Individual Tests						
Dry Matter	g/100g as rcvd	76	80	79	77	76
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	7	6	10	9
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.12	0.12	0.10	0.12
Total Recoverable Chromium	mg/kg dry wt	21	18	17	21	19
Total Recoverable Copper	mg/kg dry wt	39	34	40	24	50
Total Recoverable Lead	mg/kg dry wt	28	28	33	28	26
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	0.15	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	15	13	17	16
Total Recoverable Zinc	mg/kg dry wt	99	110	115	89	92

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
alpha-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
beta-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
delta-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
gamma-BHC (Lindane)	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
cis-Chlordane	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
trans-Chlordane	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
2,4'-DDD	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
4,4'-DDD	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
2,4'-DDE	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
4,4'-DDE	mg/kg dry wt	0.015	0.015	0.018	< 0.013	< 0.014
2,4'-DDT	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
4,4'-DDT	mg/kg dry wt	< 0.014	< 0.013	0.015	< 0.013	< 0.014

Sample Type: Soil

Sample Name:	Composite of 39630 180-1, 180-2, 180-3 and 180-4	Composite of 39630 181-1, 181-2, 181-3 and 181-4	Composite of 39630 182-1, 182-2, 182-3 and 182-4	Composite of 39630 183-1, 183-2, 183-3 and 183-4	Composite of 39630 184-1, 184-2, 184-3 and 184-4
Lab Number:	3260600.297	3260600.298	3260600.299	3260600.300	3260600.301

Organochlorine Pesticides Screening in Soil

Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Endosulfan I	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Endosulfan II	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Endosulfan sulphate	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Endrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Endrin aldehyde	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Endrin ketone	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Heptachlor	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Heptachlor epoxide	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Hexachlorobenzene	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014
Methoxychlor	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.013	< 0.014

Sample Name:	Composite of 39630 185-1, 185-2, 185-3 and 185-4	Composite of 39630 186-1, 186-2, 186-3 and 186-4	Composite of 39630 187-1, 187-2, 187-3 and 187-4	Composite of 39630 188-1, 188-2, and 188-4	Composite of 39630 189-1, 189-2, 189-3 and 189-4
Lab Number:	3260600.302	3260600.303	3260600.304	3260600.305	3260600.306

Individual Tests

Dry Matter	g/100g as rcvd	76	76	75	74	75
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Heavy Metals with Mercury, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	10	11	11	11	10
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.11	0.13	0.13	0.13
Total Recoverable Chromium	mg/kg dry wt	21	22	22	22	23
Total Recoverable Copper	mg/kg dry wt	25	24	30	28	28
Total Recoverable Lead	mg/kg dry wt	29	28	31	30	30
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	19	19	19	19
Total Recoverable Zinc	mg/kg dry wt	91	95	99	96	102

Organochlorine Pesticides Screening in Soil

Aldrin	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
alpha-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
beta-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
delta-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
4,4'-DDE	mg/kg dry wt	0.027	< 0.013	0.016	0.018	0.029
2,4'-DDT	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Endosulfan I	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Endosulfan II	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Endrin	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Endrin ketone	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Heptachlor	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013

Sample Type: Soil

Sample Name:	Composite of 39630 185-1, 185-2, 185-3 and 185-4	Composite of 39630 186-1, 186-2, 186-3 and 186-4	Composite of 39630 187-1, 187-2, 187-3 and 187-4	Composite of 39630 188-1, 188-2, and 188-4	Composite of 39630 189-1, 189-2, 189-3 and 189-4
Lab Number:	3260600.302	3260600.303	3260600.304	3260600.305	3260600.306

Organochlorine Pesticides Screening in Soil						
Methoxychlor	mg/kg dry wt	< 0.014	< 0.013	< 0.014	< 0.014	< 0.013

Sample Name:	Composite of 39630 190-1, 190-2, 190-3 and 190-4	Composite of 39630 191-1, 191-2, 191-3 and 191-4	Composite of 39630 192-1, 192-2, 192-3 and 192-4	Composite of 39630 193-1, 193-2, 193-3 and 193-4	Composite of 39630 194-1, 194-2, 194-3 and 194-4
Lab Number:	3260600.307	3260600.308	3260600.309	3260600.310	3260600.311

Individual Tests						
Dry Matter	g/100g as rcvd	79	78	80	81	82

Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	9	10	11	11
Total Recoverable Cadmium	mg/kg dry wt	0.11	0.12	0.11	0.12	0.12
Total Recoverable Chromium	mg/kg dry wt	22	21	22	23	22
Total Recoverable Copper	mg/kg dry wt	27	32	33	25	25
Total Recoverable Lead	mg/kg dry wt	28	28	29	28	27
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	18	19	19	18
Total Recoverable Zinc	mg/kg dry wt	92	91	92	92	87

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.014	0.044	0.017	0.018	0.044
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	0.017	< 0.012	< 0.013	0.018
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013

Sample Name:	Composite of 39630 195-1, 195-2, 195-3 and 195-4	Composite of 39630 196-1, 196-2, 196-3 and 196-4	Composite of 39630 197-1, 197-2, 197-3 and 197-4	Composite of 39630 198-1, 198-2, 198-3 and 198-4	Composite of 39630 213-1, 213-2, 213-3 and 213-4
Lab Number:	3260600.312	3260600.313	3260600.314	3260600.315	3260600.316

Individual Tests						
Dry Matter	g/100g as rcvd	80	79	79	77	77

Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	13	12	10	11	10
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.14	0.11	0.13	0.12
Total Recoverable Chromium	mg/kg dry wt	23	23	22	22	21

Sample Type: Soil

Sample Name:	Composite of 39630 195-1, 195-2, 195-3 and 195-4	Composite of 39630 196-1, 196-2, 196-3 and 196-4	Composite of 39630 197-1, 197-2, 197-3 and 197-4	Composite of 39630 198-1, 198-2, 198-3 and 198-4	Composite of 39630 213-1, 213-2, 213-3 and 213-4
Lab Number:	3260600.312	3260600.313	3260600.314	3260600.315	3260600.316

Heavy Metals with Mercury, Screen Level						
Total Recoverable Copper	mg/kg dry wt	24	29	28	27	25
Total Recoverable Lead	mg/kg dry wt	29	27	27	34	28
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	19	19	18	18	17
Total Recoverable Zinc	mg/kg dry wt	89	94	91	99	89

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.014	0.030	0.019	0.017	0.025
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	0.020	0.013	< 0.013	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013

Sample Name:	Composite of 39630 214-1, 214-2, 214-3 and 214-4	Composite of 39630 215-1, 215-2, 215-3 and 215-4	Composite of 39630 216-1, 216-2, 216-3 and 216-4	Composite of 39630 217-1, 217-2, 217-3 and 217-4
Lab Number:	3260600.317	3260600.318	3260600.319	3260600.320

Individual Tests					
Dry Matter	g/100g as rcvd	75	76	76	76
Heavy Metals with Mercury, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	10	10	10	9
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.15	< 0.10	0.10
Total Recoverable Chromium	mg/kg dry wt	20	19	18	19
Total Recoverable Copper	mg/kg dry wt	24	55	31	26
Total Recoverable Lead	mg/kg dry wt	28	26	24	26
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	16	15	16
Total Recoverable Zinc	mg/kg dry wt	97	89	82	85

Organochlorine Pesticides Screening in Soil					
Aldrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
alpha-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
beta-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
delta-BHC	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
gamma-BHC (Lindane)	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
cis-Chlordane	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014

Sample Type: Soil					
Sample Name:		Composite of 39630 214-1, 214-2, 214-3 and 214-4	Composite of 39630 215-1, 215-2, 215-3 and 215-4	Composite of 39630 216-1, 216-2, 216-3 and 216-4	Composite of 39630 217-1, 217-2, 217-3 and 217-4
Lab Number:		3260600.317	3260600.318	3260600.319	3260600.320
Organochlorine Pesticides Screening in Soil					
trans-Chlordane	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
2,4'-DDD	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
4,4'-DDD	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
2,4'-DDE	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
4,4'-DDE	mg/kg dry wt	0.016	0.017	0.017	0.031
2,4'-DDT	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
4,4'-DDT	mg/kg dry wt	< 0.014	< 0.013	0.021	0.023
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Endosulfan I	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Endosulfan II	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Endosulfan sulphate	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Endrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Endrin aldehyde	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Endrin ketone	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Heptachlor	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Heptachlor epoxide	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Hexachlorobenzene	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014
Methoxychlor	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.014

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%.	-	257-320
Heavy Metals with Mercury, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	257-320
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	257-320
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	257-320
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-4, 6-194, 196-256, 323

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 29-Apr-2023 and 11-May-2023. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Kim Harrison MSc
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 3

Client:	Davis Ogilvie & Partners Limited	Lab No:	3340778	SPV1
Contact:	Gareth Oddy C/- Davis Ogilvie & Partners Limited PO Box 589 Addington Christchurch 8140	Date Received:	11-Aug-2023	
		Date Reported:	16-Aug-2023	
		Quote No:	82763	
		Order No:	39630	
		Client Reference:		
		Submitted By:	Andy Bunce	

Sample Type: Soil

Sample Name:	Composite of 39630 154-1, 39630 154-2, 39630 154-3 and 39630 154-4	Composite of 39630 155-1, 39630 155-2, 39630 155-3 and 39630 155-4	Composite of 39630 156-1, 39630 156-2, 39630 156-3 and 39630 156-4	Composite of 39630 157-1, 39630 157-2, 39630 157-3 and 39630 157-4	Composite of 39630 158-1, 39630 158-2, 39630 158-3 and 39630 158-4
Lab Number:	3340778.25	3340778.26	3340778.27	3340778.28	3340778.29

Individual Tests

Test	Unit	3340778.25	3340778.26	3340778.27	3340778.28	3340778.29
Dry Matter	g/100g as rcvd	75	77	77	73	76
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	11	10	10	11	10
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.21	0.14	0.11	0.13
Total Recoverable Chromium	mg/kg dry wt	20	18	18	19	19
Total Recoverable Copper	mg/kg dry wt	44	34	43	34	49
Total Recoverable Lead	mg/kg dry wt	26	23	23	24	25
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	16	14	14	15	15
Total Recoverable Zinc	mg/kg dry wt	76	71	72	72	76

Organochlorine Pesticides Screening in Soil

Test	Unit	3340778.25	3340778.26	3340778.27	3340778.28	3340778.29
Aldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
alpha-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
4,4'-DDE	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.09	< 0.08
Dieldrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Endosulfan I	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Heptachlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014	< 0.013

Sample Type: Soil					
Sample Name:	Composite of 39630 154-1, 39630 154-2, 39630 154-3 and 39630 154-4	Composite of 39630 155-1, 39630 155-2, 39630 155-3 and 39630 155-4	Composite of 39630 156-1, 39630 156-2, 39630 156-3 and 39630 156-4	Composite of 39630 157-1, 39630 157-2, 39630 157-3 and 39630 157-4	Composite of 39630 158-1, 39630 158-2, 39630 158-3 and 39630 158-4
Lab Number:	3340778.25	3340778.26	3340778.27	3340778.28	3340778.29
Organochlorine Pesticides Screening in Soil					
Methoxychlor	mg/kg dry wt	< 0.013	< 0.013	< 0.013	< 0.014
Sample Name:	Composite of 39630 159-1, 39630 159-2, 39630 159-3 and 39630 159-4				
Lab Number:	3340778.30				
Individual Tests					
Dry Matter	g/100g as rcvd	75			
Heavy Metals with Mercury, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	10			
Total Recoverable Cadmium	mg/kg dry wt	0.12			
Total Recoverable Chromium	mg/kg dry wt	19			
Total Recoverable Copper	mg/kg dry wt	43			
Total Recoverable Lead	mg/kg dry wt	25			
Total Recoverable Mercury	mg/kg dry wt	< 0.10			
Total Recoverable Nickel	mg/kg dry wt	15			
Total Recoverable Zinc	mg/kg dry wt	78			
Organochlorine Pesticides Screening in Soil					
Aldrin	mg/kg dry wt	< 0.013			
alpha-BHC	mg/kg dry wt	< 0.013			
beta-BHC	mg/kg dry wt	< 0.013			
delta-BHC	mg/kg dry wt	< 0.013			
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013			
cis-Chlordane	mg/kg dry wt	< 0.013			
trans-Chlordane	mg/kg dry wt	< 0.013			
2,4'-DDD	mg/kg dry wt	< 0.013			
4,4'-DDD	mg/kg dry wt	< 0.013			
2,4'-DDE	mg/kg dry wt	< 0.013			
4,4'-DDE	mg/kg dry wt	< 0.013			
2,4'-DDT	mg/kg dry wt	< 0.013			
4,4'-DDT	mg/kg dry wt	< 0.013			
Total DDT Isomers	mg/kg dry wt	< 0.08			
Dieldrin	mg/kg dry wt	< 0.013			
Endosulfan I	mg/kg dry wt	< 0.013			
Endosulfan II	mg/kg dry wt	< 0.013			
Endosulfan sulphate	mg/kg dry wt	< 0.013			
Endrin	mg/kg dry wt	< 0.013			
Endrin aldehyde	mg/kg dry wt	< 0.013			
Endrin ketone	mg/kg dry wt	< 0.013			
Heptachlor	mg/kg dry wt	< 0.013			
Heptachlor epoxide	mg/kg dry wt	< 0.013			
Hexachlorobenzene	mg/kg dry wt	< 0.013			
Methoxychlor	mg/kg dry wt	< 0.013			

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%.	-	25-30

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Heavy Metals with Mercury, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	25-30
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	25-30
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	25-30
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-24

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 11-Aug-2023 and 16-Aug-2023. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Kim Harrison MSc
Client Services Manager - Environmental

Certificate of Analysis

Client:	Davis Ogilvie & Partners Limited	Lab No:	3719366	SPV2
Contact:	Andy Bunce	Date Received:	19-Nov-2024	
	C/- Davis Ogilvie & Partners Limited	Date Reported:	26-Nov-2024	(Amended)
	PO Box 589	Quote No:	82763	
	Addington	Order No:		
	Christchurch 8140	Client Reference:	39630	
		Submitted By:	Andy Bunce	

Sample Type: Soil

Sample Name:	39630_231_1 19-Nov-2024	39630_231_2 19-Nov-2024	39630_231_3 19-Nov-2024	39630_231_4 19-Nov-2024	39630_232_1 19-Nov-2024
Lab Number:	3719366.1	3719366.2	3719366.3	3719366.4	3719366.5

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	8	7	10	9
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.11	0.12	0.11	0.12
Total Recoverable Chromium	mg/kg dry wt	19	18	18	20	20
Total Recoverable Copper	mg/kg dry wt	29	25	27	52	33
Total Recoverable Lead	mg/kg dry wt	26	25	25	26	28
Total Recoverable Nickel	mg/kg dry wt	16	16	16	18	17
Total Recoverable Zinc	mg/kg dry wt	82	77	80	93	90

Sample Name:	39630_232_2 19-Nov-2024	39630_232_3 19-Nov-2024	39630_232_4 19-Nov-2024	39630_233_1 19-Nov-2024	39630_233_2 19-Nov-2024
Lab Number:	3719366.6	3719366.7	3719366.8	3719366.9	3719366.10

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	7	8	7	9	8
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	0.11	< 0.10
Total Recoverable Chromium	mg/kg dry wt	19	19	19	20	19
Total Recoverable Copper	mg/kg dry wt	18	20	22	39	20
Total Recoverable Lead	mg/kg dry wt	22	25	24	31	23
Total Recoverable Nickel	mg/kg dry wt	16	16	16	18	16
Total Recoverable Zinc	mg/kg dry wt	72	73	77	93	76

Sample Name:	39630_233_3 19-Nov-2024	39630_233_4 19-Nov-2024	39630_234_1 19-Nov-2024	39630_234_2 19-Nov-2024	39630_234_3 19-Nov-2024
Lab Number:	3719366.11	3719366.12	3719366.13	3719366.14	3719366.15

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	9	8	9	7	9
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.11	0.12	0.10	0.11
Total Recoverable Chromium	mg/kg dry wt	20	18	21	19	21
Total Recoverable Copper	mg/kg dry wt	34	25	46	26	29
Total Recoverable Lead	mg/kg dry wt	26	24	33	24	26
Total Recoverable Nickel	mg/kg dry wt	17	16	19	16	17
Total Recoverable Zinc	mg/kg dry wt	84	79	96	79	87

Sample Name:	39630_234_4 19-Nov-2024	39630_235_1 19-Nov-2024	39630_235_2 19-Nov-2024	39630_235_3 19-Nov-2024	39630_235_4 19-Nov-2024
Lab Number:	3719366.16	3719366.17	3719366.18	3719366.19	3719366.20

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	9	9	8	9
Total Recoverable Cadmium	mg/kg dry wt	0.10	< 0.10	0.11	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	20	20	20	18	20
Total Recoverable Copper	mg/kg dry wt	35	40	45	39	48
Total Recoverable Lead	mg/kg dry wt	25	24	29	24	25



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil						
Sample Name:	39630_234_4 19-Nov-2024	39630_235_1 19-Nov-2024	39630_235_2 19-Nov-2024	39630_235_3 19-Nov-2024	39630_235_4 19-Nov-2024	
Lab Number:	3719366.16	3719366.17	3719366.18	3719366.19	3719366.20	
Heavy Metals, Screen Level						
Total Recoverable Nickel	mg/kg dry wt	18	18	17	16	17
Total Recoverable Zinc	mg/kg dry wt	87	82	86	76	86
Sample Name:	39630_236_1 19-Nov-2024	39630_236_2 19-Nov-2024	39630_236_3 19-Nov-2024	39630_236_4 19-Nov-2024	39630_237_1 19-Nov-2024	
Lab Number:	3719366.21	3719366.22	3719366.23	3719366.24	3719366.25	
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	8	9	9	9
Total Recoverable Cadmium	mg/kg dry wt	0.12	< 0.10	0.12	0.11	0.11
Total Recoverable Chromium	mg/kg dry wt	18	19	20	20	20
Total Recoverable Copper	mg/kg dry wt	39	46	40	34	32
Total Recoverable Lead	mg/kg dry wt	26	23	27	26	26
Total Recoverable Nickel	mg/kg dry wt	16	16	18	17	17
Total Recoverable Zinc	mg/kg dry wt	80	76	86	84	82
Sample Name:	39630_237_2 19-Nov-2024	39630_237_3 19-Nov-2024	39630_237_4 19-Nov-2024	39630_238_1 19-Nov-2024	39630_238_2 19-Nov-2024	
Lab Number:	3719366.26	3719366.27	3719366.28	3719366.29	3719366.30	
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	9	9	9	8	8
Total Recoverable Cadmium	mg/kg dry wt	0.11	< 0.10	< 0.10	< 0.10	0.11
Total Recoverable Chromium	mg/kg dry wt	19	20	19	19	19
Total Recoverable Copper	mg/kg dry wt	35	31	45	26	42
Total Recoverable Lead	mg/kg dry wt	25	26	26	26	24
Total Recoverable Nickel	mg/kg dry wt	16	18	17	16	16
Total Recoverable Zinc	mg/kg dry wt	80	83	84	80	80
Sample Name:	39630_238_3 19-Nov-2024	39630_238_4 19-Nov-2024	39630_239_1 19-Nov-2024	39630_239_2 19-Nov-2024	39630_239_3 19-Nov-2024	
Lab Number:	3719366.31	3719366.32	3719366.33	3719366.34	3719366.35	
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	8	9	9	9
Total Recoverable Cadmium	mg/kg dry wt	0.10	0.14	0.12	0.11	0.12
Total Recoverable Chromium	mg/kg dry wt	19	19	20	19	20
Total Recoverable Copper	mg/kg dry wt	39	79	39	37	59
Total Recoverable Lead	mg/kg dry wt	26	25	25	27	28
Total Recoverable Nickel	mg/kg dry wt	16	17	16	16	17
Total Recoverable Zinc	mg/kg dry wt	81	86	85	82	91
Sample Name:	39630_239_4 19-Nov-2024	39630_240_1 19-Nov-2024	39630_240_2 19-Nov-2024	39630_240_3 19-Nov-2024	39630_240_4 19-Nov-2024	
Lab Number:	3719366.36	3719366.37	3719366.38	3719366.39	3719366.40	
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	9	9	8	9	6
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.13	0.14	0.11	0.12
Total Recoverable Chromium	mg/kg dry wt	20	20	19	19	15
Total Recoverable Copper	mg/kg dry wt	46	37	36	42	32
Total Recoverable Lead	mg/kg dry wt	27	27	25	27	20
Total Recoverable Nickel	mg/kg dry wt	16	17	15	17	14
Total Recoverable Zinc	mg/kg dry wt	88	89	80	86	69
Sample Name:	39630_241_2 19-Nov-2024	39630_241_3 19-Nov-2024	39630_241_4 19-Nov-2024	39630_242_1 19-Nov-2024	39630_242_2 19-Nov-2024	
Lab Number:	3719366.41	3719366.42	3719366.43	3719366.44	3719366.45	
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	9	9	8	11
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.12	0.13	0.11	0.14
Total Recoverable Chromium	mg/kg dry wt	19	19	19	18	19
Total Recoverable Copper	mg/kg dry wt	38	37	38	32	33

Sample Type: Soil						
Sample Name:		39630_241_2 19-Nov-2024	39630_241_3 19-Nov-2024	39630_241_4 19-Nov-2024	39630_242_1 19-Nov-2024	39630_242_2 19-Nov-2024
Lab Number:		3719366.41	3719366.42	3719366.43	3719366.44	3719366.45
Heavy Metals, Screen Level						
Total Recoverable Lead	mg/kg dry wt	26	25	24	23	26
Total Recoverable Nickel	mg/kg dry wt	16	17	16	15	16
Total Recoverable Zinc	mg/kg dry wt	86	85	85	77	82
Sample Name:		39630_242_3 19-Nov-2024	39630_242_4 19-Nov-2024	39630_243_1 19-Nov-2024	39630_243_2 19-Nov-2024	39630_243_3 19-Nov-2024
Lab Number:		3719366.46	3719366.47	3719366.48	3719366.49	3719366.50
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	9	9	9	9	10
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.12	0.11	0.15	0.13
Total Recoverable Chromium	mg/kg dry wt	20	19	20	20	20
Total Recoverable Copper	mg/kg dry wt	37	36	35	61	39
Total Recoverable Lead	mg/kg dry wt	26	26	27	29	27
Total Recoverable Nickel	mg/kg dry wt	17	16	17	18	17
Total Recoverable Zinc	mg/kg dry wt	87	83	83	93	86
Sample Name:		39630_243_4 19-Nov-2024	39630_244_1 19-Nov-2024	39630_244_2 19-Nov-2024	39630_244_3 19-Nov-2024	39630_244_4 19-Nov-2024
Lab Number:		3719366.51	3719366.52	3719366.53	3719366.54	3719366.55
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	8	8	9	8
Total Recoverable Cadmium	mg/kg dry wt	0.12	< 0.10	0.10	0.13	0.11
Total Recoverable Chromium	mg/kg dry wt	19	20	19	20	18
Total Recoverable Copper	mg/kg dry wt	44	28	38	38	34
Total Recoverable Lead	mg/kg dry wt	27	26	25	27	25
Total Recoverable Nickel	mg/kg dry wt	16	18	16	16	15
Total Recoverable Zinc	mg/kg dry wt	84	85	82	84	79
Sample Name:		39630_245_1 19-Nov-2024	39630_245_2 19-Nov-2024	39630_245_3 19-Nov-2024	39630_245_4 19-Nov-2024	39630_246_1 19-Nov-2024
Lab Number:		3719366.56	3719366.57	3719366.58	3719366.59	3719366.60
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	8	8	9	8
Total Recoverable Cadmium	mg/kg dry wt	0.11	0.11	0.11	0.11	0.10
Total Recoverable Chromium	mg/kg dry wt	19	19	19	20	18
Total Recoverable Copper	mg/kg dry wt	36	31	30	35	26
Total Recoverable Lead	mg/kg dry wt	25	25	26	27	23
Total Recoverable Nickel	mg/kg dry wt	16	16	16	17	16
Total Recoverable Zinc	mg/kg dry wt	82	79	82	86	74
Sample Name:		39630_246_2 19-Nov-2024	39630_246_3 19-Nov-2024	39630_246_4 19-Nov-2024	Composite of 39630_231_1-4 19-Nov-2024	Composite of 39630_232_1-4 19-Nov-2024
Lab Number:		3719366.61	3719366.62	3719366.63	3719366.64	3719366.65
Individual Tests						
Dry Matter	g/100g as rcvd	-	-	-	90	90
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	8	9	-	-
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.11	0.11	-	-
Total Recoverable Chromium	mg/kg dry wt	17	18	19	-	-
Total Recoverable Copper	mg/kg dry wt	33	26	35	-	-
Total Recoverable Lead	mg/kg dry wt	25	25	27	-	-
Total Recoverable Nickel	mg/kg dry wt	16	17	17	-	-
Total Recoverable Zinc	mg/kg dry wt	77	77	83	-	-
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	-	-	-	< 0.011	< 0.011
alpha-BHC	mg/kg dry wt	-	-	-	< 0.011	< 0.011
beta-BHC	mg/kg dry wt	-	-	-	< 0.011	< 0.011

Sample Type: Soil

Sample Name:		39630_246_2 19-Nov-2024	39630_246_3 19-Nov-2024	39630_246_4 19-Nov-2024	Composite of 39630_231_1-4 19-Nov-2024	Composite of 39630_232_1-4 19-Nov-2024
Lab Number:		3719366.61	3719366.62	3719366.63	3719366.64	3719366.65
Organochlorine Pesticides Screening in Soil						
delta-BHC	mg/kg dry wt	-	-	-	< 0.011	< 0.011
gamma-BHC (Lindane)	mg/kg dry wt	-	-	-	< 0.011	< 0.011
cis-Chlordane	mg/kg dry wt	-	-	-	< 0.011	< 0.011
trans-Chlordane	mg/kg dry wt	-	-	-	< 0.011	< 0.011
2,4'-DDD	mg/kg dry wt	-	-	-	< 0.011	< 0.011
4,4'-DDD	mg/kg dry wt	-	-	-	< 0.011	< 0.011
2,4'-DDE	mg/kg dry wt	-	-	-	< 0.011	< 0.011
4,4'-DDE	mg/kg dry wt	-	-	-	0.029	0.018
2,4'-DDT	mg/kg dry wt	-	-	-	< 0.011	< 0.011
4,4'-DDT	mg/kg dry wt	-	-	-	0.014	< 0.011
Total DDT Isomers	mg/kg dry wt	-	-	-	< 0.07	< 0.07
Dieldrin	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Endosulfan I	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Endosulfan II	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Endosulfan sulphate	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Endrin	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Endrin aldehyde	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Endrin ketone	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Heptachlor	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Heptachlor epoxide	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Hexachlorobenzene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Methoxychlor	mg/kg dry wt	-	-	-	< 0.011	< 0.011

Sample Name:		Composite of 39630_233_1-4 19-Nov-2024	Composite of 39630_234_1-4 19-Nov-2024	Composite of 39630_235_1-4 19-Nov-2024	Composite of 39630_236_1-4 19-Nov-2024	Composite of 39630_237_1-4 19-Nov-2024
Lab Number:		3719366.66	3719366.67	3719366.68	3719366.69	3719366.70

Individual Tests						
Dry Matter	g/100g as rcvd	87	88	86	90	88

Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
alpha-BHC	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
beta-BHC	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
delta-BHC	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
4,4'-DDE	mg/kg dry wt	0.024	0.017	0.021	0.038	0.017
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
4,4'-DDT	mg/kg dry wt	0.013	< 0.011	< 0.012	< 0.011	< 0.011
Total DDT Isomers	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07
Dieldrin	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Endosulfan I	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Endosulfan II	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Endrin	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Endrin ketone	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Heptachlor	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011
Methoxychlor	mg/kg dry wt	< 0.012	< 0.011	< 0.012	< 0.011	< 0.011

Sample Type: Soil

Sample Name:	Composite of 39630_238_1-4 19-Nov-2024	Composite of 39630_239_1-4 19-Nov-2024	Composite of 39630_240_1-4 19-Nov-2024	Composite of 39630_241_1-4 19-Nov-2024	Composite of 39630_242_1-4 19-Nov-2024	
Lab Number:	3719366.71	3719366.72	3719366.73	3719366.74	3719366.75	
Individual Tests						
Dry Matter	g/100g as rcvd	88	89	89	87	87
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
alpha-BHC	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
beta-BHC	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
delta-BHC	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
4,4'-DDE	mg/kg dry wt	0.022	0.022	0.024	0.026	0.042
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
4,4'-DDT	mg/kg dry wt	0.015	0.013	0.014	0.016	0.021
Total DDT Isomers	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.07	0.07
Dieldrin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endosulfan I	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endosulfan II	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endrin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endrin ketone	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Heptachlor	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Methoxychlor	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012

Sample Name:	Composite of 39630_243_1-4 19-Nov-2024	Composite of 39630_244_1-4 19-Nov-2024	Composite of 39630_245_1-4 19-Nov-2024	Composite of 39630_246_1-4 19-Nov-2024	39630_241_1 19-Nov-2024
Lab Number:	3719366.76	3719366.77	3719366.78	3719366.79	3719366.80

Individual Tests						
Dry Matter	g/100g as rcvd	87	86	87	87	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	-	-	-	-	11
Total Recoverable Cadmium	mg/kg dry wt	-	-	-	-	0.11
Total Recoverable Chromium	mg/kg dry wt	-	-	-	-	21
Total Recoverable Copper	mg/kg dry wt	-	-	-	-	37
Total Recoverable Lead	mg/kg dry wt	-	-	-	-	28
Total Recoverable Nickel	mg/kg dry wt	-	-	-	-	17
Total Recoverable Zinc	mg/kg dry wt	-	-	-	-	90
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
alpha-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
beta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
delta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
4,4'-DDE	mg/kg dry wt	0.031	0.028	0.032	0.046	-
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-

Sample Type: Soil						
Sample Name:	Composite of 39630_243_1-4 19-Nov-2024	Composite of 39630_244_1-4 19-Nov-2024	Composite of 39630_245_1-4 19-Nov-2024	Composite of 39630_246_1-4 19-Nov-2024	39630_241_1 19-Nov-2024	
Lab Number:	3719366.76	3719366.77	3719366.78	3719366.79	3719366.80	
Organochlorine Pesticides Screening in Soil						
4,4'-DDT	mg/kg dry wt	0.015	0.015	0.017	0.036	-
Total DDT Isomers	mg/kg dry wt	< 0.07	< 0.07	< 0.07	0.08	-
Dieldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Endosulfan I	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Endosulfan II	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Endrin	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Endrin ketone	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Heptachlor	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-
Methoxychlor	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.012	-

Analyst's Comments

Amended Report: This certificate of analysis replaces report '3719366-SPv1' issued on 26-Nov-2024 at 4:13 pm.
Reason for amendment: Composite IDs shortened for ESDat.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-63, 80
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	1-63, 80
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	64-79
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	64-79
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-63, 80

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 19-Nov-2024 and 26-Nov-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Kim Harrison MSc
Client Services Manager - Environmental

Certificate of Analysis

Client:	Davis Ogilvie & Partners Limited	Lab No:	3744918	SPV1
Contact:	Andy Bunce	Date Received:	19-Dec-2024	
	C/- Davis Ogilvie & Partners Limited	Date Reported:	27-Dec-2024	
	PO Box 589	Quote No:	82763	
	Addington	Order No:		
	Christchurch 8140	Client Reference:	39630	
		Submitted By:	Andy Bunce	

Sample Type: Soil

Sample Name:	39630_209_1 19-Dec-2024 12:00 pm	39630_209_2 19-Dec-2024 12:00 pm	39630_209_3 19-Dec-2024 12:00 pm	39630_209_4 19-Dec-2024 12:00 pm	39630_210_1 19-Dec-2024 12:00 pm
Lab Number:	3744918.1	3744918.2	3744918.3	3744918.4	3744918.5

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	9	8	7	8	8
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	0.12	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	21	18	17	18	18
Total Recoverable Copper	mg/kg dry wt	16	18	21	18	17
Total Recoverable Lead	mg/kg dry wt	25	23	21	21	22
Total Recoverable Nickel	mg/kg dry wt	18	16	15	16	16
Total Recoverable Zinc	mg/kg dry wt	77	73	71	73	71

Sample Name:	39630_210_2 19-Dec-2024 12:00 pm	39630_210_3 19-Dec-2024 12:00 pm	39630_210_4 19-Dec-2024 12:00 pm	39630_211_1 19-Dec-2024 12:00 pm	39630_211_2 19-Dec-2024 12:00 pm
Lab Number:	3744918.6	3744918.7	3744918.8	3744918.9	3744918.10

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	6	9	9	9
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	0.11	0.11
Total Recoverable Chromium	mg/kg dry wt	15	19	20	19	19
Total Recoverable Copper	mg/kg dry wt	17	18	26	23	26
Total Recoverable Lead	mg/kg dry wt	18.6	19.1	25	25	24
Total Recoverable Nickel	mg/kg dry wt	14	15	17	16	16
Total Recoverable Zinc	mg/kg dry wt	64	65	86	84	83

Sample Name:	39630_211_3 19-Dec-2024 12:00 pm	39630_211_4 19-Dec-2024 12:00 pm	39630_212_1 19-Dec-2024 12:00 pm	39630_212_2 19-Dec-2024 12:00 pm	39630_212_3 19-Dec-2024 12:00 pm
Lab Number:	3744918.11	3744918.12	3744918.13	3744918.14	3744918.15

Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	9	9	11	12
Total Recoverable Cadmium	mg/kg dry wt	0.15	< 0.10	< 0.10	0.13	0.14
Total Recoverable Chromium	mg/kg dry wt	21	19	20	23	20
Total Recoverable Copper	mg/kg dry wt	35	27	26	26	35
Total Recoverable Lead	mg/kg dry wt	28	25	25	31	28
Total Recoverable Nickel	mg/kg dry wt	17	16	18	19	17
Total Recoverable Zinc	mg/kg dry wt	101	83	83	96	101

Sample Type: Soil

Sample Name:	39630_212_4 19-Dec-2024 12:00 pm	Composite of 39630_209_1, 39630_209_2, 39630_209_3 & 39630_209_4 19-Dec-2024 12:00 pm	Composite of 39630_210_1, 39630_210_2, 39630_210_3 & 39630_210_4 19-Dec-2024 12:00 pm	Composite of 39630_211_1, 39630_211_2, 39630_211_3 & 39630_211_4 19-Dec-2024 12:00 pm	Composite of 39630_212_1, 39630_212_2, 39630_212_3 & 39630_212_4 19-Dec-2024 12:00 pm
Lab Number:	3744918.16	3744918.17	3744918.18	3744918.19	3744918.20

Individual Tests

Dry Matter	g/100g as rcvd	-	86	89	86	87
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Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	10	-	-	-	-
Total Recoverable Cadmium	mg/kg dry wt	0.13	-	-	-	-
Total Recoverable Chromium	mg/kg dry wt	22	-	-	-	-
Total Recoverable Copper	mg/kg dry wt	26	-	-	-	-
Total Recoverable Lead	mg/kg dry wt	29	-	-	-	-
Total Recoverable Nickel	mg/kg dry wt	19	-	-	-	-
Total Recoverable Zinc	mg/kg dry wt	91	-	-	-	-

Organochlorine Pesticides Screening in Soil

Aldrin	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
alpha-BHC	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
beta-BHC	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
delta-BHC	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
gamma-BHC (Lindane)	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
cis-Chlordane	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
trans-Chlordane	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
2,4'-DDD	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDD	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
2,4'-DDE	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDE	mg/kg dry wt	-	0.031	0.040	0.037	0.043
2,4'-DDT	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDT	mg/kg dry wt	-	0.012	0.016	0.015	0.015
Total DDT Isomers	mg/kg dry wt	-	< 0.07	< 0.07	< 0.07	< 0.07
Dieldrin	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan I	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan II	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan sulphate	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Endrin	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Endrin aldehyde	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Endrin ketone	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Heptachlor	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Heptachlor epoxide	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Hexachlorobenzene	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012
Methoxychlor	mg/kg dry wt	-	< 0.012	< 0.012	< 0.012	< 0.012

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-16
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	1-16
Organochlorine Pesticides Screening in Soil	Sonication extraction, GC-ECD analysis. Tested on as received sample. In-house based on US EPA 8081.	0.010 - 0.06 mg/kg dry wt	17-20

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	17-20
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-16

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 20-Dec-2024 and 24-Dec-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Kim Harrison MSc
Client Services Manager - Environmental