

File No.: 39630

18 August 2023

Sovereign Palms Ltd.
PO BOX 13 349
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Attention: Sean Monaghan

Email: monaghan@suburbanestates.co.nz

Dear Sean,

**TOPSOIL INVESTIGATION REPORT - STAGES 3 to 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 2**

1.0 INTRODUCTION AND SCOPE

Environmental testing was undertaken within Stages 3, 4 and 5 of the Oakbridge subdivision by Davis Ogilvie & Partners Limited (Davis Ogilvie) in April 2023, 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 environmental testing focused on the assessment of recently placed topsoil across the three stages.

Davis Ogilvie previously undertook 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) above the adopted background criteria were widespread 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. Asbestos containing material (ACM) was observed in some locations.

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

1.1 Assessment Methodology

The following investigation and assessment methodology was undertaken:

- Soil sample locations were collected from the ground surface and evenly distributed to gain suitable area-wide representation of the topsoil on each residential lot.
- 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.
- Once collected, soil samples were screened for heavy metals using a field portable X-Ray Fluorescence (XRF) analyser. The XRF analyser was an Olympus Vanta C-Series VCW Model which was screened against XRF calibration standards and blanks prior to use.
- 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 Hills Lab under the standard chain of custody procedures for laboratory analysis of potential contaminants of concern.
- Following receipt of the samples by Hills, 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.

Fieldwork was undertaken in April 2023. Lots that were ready for soil sampling (yellow) are shown in Figure 2. Lots that had not yet been topsoiled and could therefore not be sampled are shown in red.

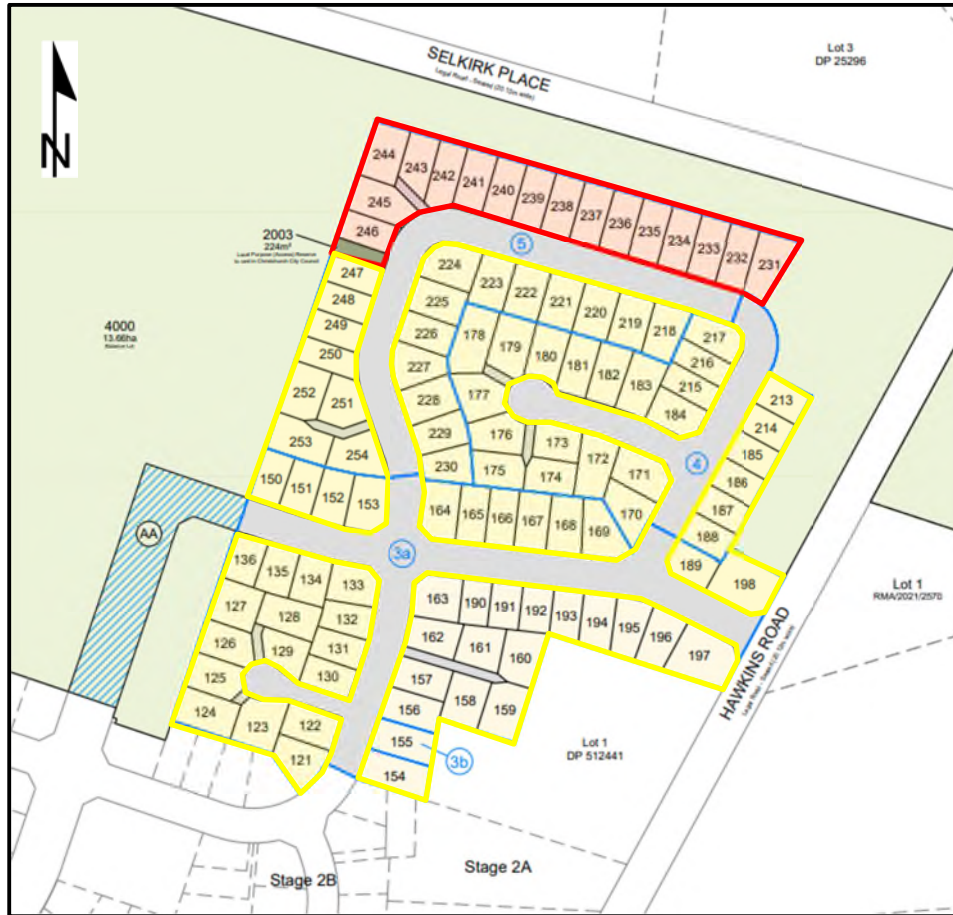


Figure 2: Modified extract from the Oakbridge Scheme Plan – Stages 3-5 (overall plan) (DWG 350/D) showing sampled areas as part of this investigation. Sampling was undertaken in lots shaded in yellow. Red shaded lots were not ready for testing (had no placed topsoil) at the time of the investigation.

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 (Tables 1 to 8). 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) consistently exceed established soil background levels for this area (20.3 mg/kg).
- Approximately a third of the composite topsoil samples contain zinc concentrations (61 to 128 mg/kg) which exceed established background levels for this area (93.94 mg/kg).
- Eight 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 8 of the 82 sampled lots contained chromium at a concentration of 23 mg/kg.
- Arsenic concentrations exceed background levels within 2 of the 82 composite 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).
- OCP concentrations mostly do not exceed ambient concentrations, as defined by the MfE⁴. The composite sample for Lot 250 had a DDT concentration of 0.03 mg/kg compared to an ambient concentration of 0.0235 mg/kg. None of the analysed OCP concentrations exceed the NESCS residential guideline value (10% produce).
- 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'.

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

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.

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 site, sample location and depth identifier (e.g., 121-1 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.
- Hill Laboratories are an International Accredited New Zealand (IANZ) laboratory.

4.0 CONCLUSIONS

On the basis of the topsoil sampling results across stages 3, 4 and 5 (for those lots which were available at the time of testing), 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 are consistently in excess of background levels, the topsoil on site does not meet the definition of 'cleanfill'. 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 will be required. Topsoil that leaves site must be taken to an accredited facility authorised to receive it.

Sample results for lots 133, 136 and 161 showed heavy metal and OCP concentrations below the background level, and therefore the topsoil on these lots is considered as 'cleanfill' and may be disposed of at a cleanfill site, subject to approval by the receiving site.

We understand that a global consent is likely to be sought which will cover Oakbridge Stages 3, 4 and 5. A site management plan will be required as a condition of this global resource consent. The site management plan should include every lot within Stages 3, 4 and 5, and must be followed when soil disturbance and/or removal volumes exceed the permitted activity allowance, as outlined in the NES.

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

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 to 5: Soil Analytical Results - Tables 1-8

Laboratory Results

Limitations

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Table 1: Oakbridge Stages 3 to 5: Soil Analytical Results (Heavy Metals) - 39630

Composite samples for Lot	Depth (m)	Hills Laboratory No.	Sample description	Sample date	Heavy Metals (mg/kg dry weight)							
					Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
Background Concentrations (Gley, n=6) ¹					11	0.28	19.3	16.425	19.3	0.07	16.1	77.1
Background Concentrations (Recent, n=18)					12.58	0.19	22.7	20.3	40.96	0.11	20.7	93.94
NES:CS SCS for Residential (10% Produce) Land Use Scenario					20	3	460	>10 000	210	310	400	7400
Australian and New Zealand Guidelines for Fresh and Marine Water Quality - GV-high (mg/kg) ⁶					70	10	370	270	220	NA	52	410
121	0.0-0.15	3260600.257	Topsoil	Apr-23	9	0.13	19	37	25	< 0.10	15	76
122	0.0-0.15	3260600.258	Topsoil	Apr-23	9	0.11	19	35	25	< 0.10	15	75
123	0.0-0.15	3260600.259	Topsoil	Apr-23	10	< 0.10	18	39	24	< 0.10	14	67
124	0.0-0.15	3260600.260	Topsoil	Apr-23	8	< 0.10	18	40	23	< 0.10	14	65
125	0.0-0.15	3260600.261	Topsoil	Apr-23	11	0.14	21	40	29	< 0.10	17	116
126	0.0-0.15	3260600.262	Topsoil	Apr-23	10	0.13	22	33	27	< 0.10	18	85
127	0.0-0.15	3260600.263	Topsoil	Apr-23	9	< 0.10	19	21	24	< 0.10	16	76
128	0.0-0.15	3260600.264	Topsoil	Apr-23	8	< 0.10	18	21	21	< 0.10	16	70
129	0.0-0.15	3260600.265	Topsoil	Apr-23	11	0.11	22	24	31	< 0.10	20	91
130	0.0-0.15	3260600.266	Topsoil	Apr-23	11	< 0.10	22	23	28	< 0.10	19	86
131	0.0-0.15	3260600.267	Topsoil	Apr-23	16	0.19	23	57	28	< 0.10	18	128
132	0.0-0.15	3260600.268	Topsoil	Apr-23	10	< 0.10	20	32	24	< 0.10	16	82
133	0.0-0.15	3260600.269	Topsoil	Apr-23	7	< 0.10	17	20	19	< 0.10	14	61
134	0.0-0.15	3260600.270	Topsoil	Apr-23	6	< 0.10	16	23	18	< 0.10	14	64
135	0.0-0.15	3260600.271	Topsoil	Apr-23	11	0.12	22	26	29	< 0.10	20	92
136	0.0-0.15	3260600.272	Topsoil	Apr-23	9	< 0.10	20	18	25	< 0.10	17	77
150	0.0-0.15	3260600.273	Topsoil	Apr-23	10	0.13	20	38	31	< 0.10	17	108
151	0.0-0.15	3260600.274	Topsoil	Apr-23	11	0.11	22	31	29	< 0.10	18	98
152	0.0-0.15	3260600.275	Topsoil	Apr-23	10	0.12	21	35	29	< 0.10	18	99
153	0.0-0.15	3260600.276	Topsoil	Apr-23	9	0.1	20	29	25	< 0.10	17	86
154	0.0-0.15	3340778.250	Topsoil	Aug-23	11	0.12	20	44	26	< 0.10	16	76
155	0.0-0.15	3340778.260	Topsoil	Aug-23	10	0.21	18	34	23	< 0.10	14	71
156	0.0-0.15	3340778.270	Topsoil	Aug-23	10	0.14	18	43	23	< 0.10	14	72
157	0.0-0.15	3340778.280	Topsoil	Aug-23	11	0.11	19	34	24	< 0.10	15	72
158	0.0-0.15	3340778.290	Topsoil	Aug-23	10	0.13	19	49	25	< 0.10	15	76
159	0.0-0.15	3340778.300	Topsoil	Aug-23	10	0.12	19	43	25	< 0.10	15	78
160	0.0-0.15	3260600.277	Topsoil	Apr-23	10	< 0.10	22	22	28	< 0.10	19	88
161	0.0-0.15	3260600.278	Topsoil	Apr-23	10	< 0.10	21	18	27	< 0.10	18	82
162	0.0-0.15	3260600.279	Topsoil	Apr-23	10	< 0.10	22	21	28	< 0.10	19	88
163	0.0-0.15	3260600.280	Topsoil	Apr-23	10	0.13	22	42	29	< 0.10	19	92
164	0.0-0.15	3260600.281	Topsoil	Apr-23	11	0.13	23	27	31	< 0.10	20	94
165	0.0-0.15	3260600.282	Topsoil	Apr-23	11	0.11	22	24	30	< 0.10	20	90
166	0.0-0.15	3260600.283	Topsoil	Apr-23	12	0.13	23	26	31	< 0.10	20	96
167	0.0-0.15	3260600.284	Topsoil	Apr-23	10	0.12	22	30	29	< 0.10	19	95
168	0.0-0.15	3260600.285	Topsoil	Apr-23	10	0.12	22	32	29	< 0.10	19	94
169	0.0-0.15	3260600.286	Topsoil	Apr-23	10	0.17	22	38	32	< 0.10	19	116
170	0.0-0.15	3260600.287	Topsoil	Apr-23	11	0.12	23	26	29	< 0.10	20	89
171	0.0-0.15	3260600.288	Topsoil	Apr-23	10	0.12	19	24	25	< 0.10	17	93
172	0.0-0.15	3260600.289	Topsoil	Apr-23	11	0.11	20	23	27	< 0.10	18	92
173	0.0-0.15	3260600.290	Topsoil	Apr-23	9	0.12	19	22	26	< 0.10	17	87
174	0.0-0.15	3260600.291	Topsoil	Apr-23	10	0.12	21	25	28	< 0.10	18	85
175	0.0-0.15	3260600.292	Topsoil	Apr-23	11	0.12	21	25	28	< 0.10	19	89
176	0.0-0.15	3260600.293	Topsoil	Apr-23	10	< 0.10	22	22	28	< 0.10	18	85
177	0.0-0.15	3260600.294	Topsoil	Apr-23	8	0.13	19	32	23	< 0.10	15	82
178	0.0-0.15	3260600.295	Topsoil	Apr-23	10	0.13	21	39	27	< 0.10	17	92
179	0.0-0.15	3260600.296	Topsoil	Apr-23	9	0.13	20	38	26	< 0.10	16	93
180	0.0-0.15	3260600.297	Topsoil	Apr-23	10	0.12	21	39	28	< 0.10	18	99
181	0.0-0.15	3260600.298	Topsoil	Apr-23	7	0.12	18	34	28	< 0.10	15	110
182	0.0-0.15	3260600.299	Topsoil	Apr-23	6	0.12	17	40	33	0.150	13	115
183	0.0-0.15	3260600.300	Topsoil	Apr-23	10	0.1	21	24	28	< 0.10	17	89
184	0.0-0.15	3260600.301	Topsoil	Apr-23	9	0.12	19	50	26	< 0.10	16	92
185	0.0-0.15	3260600.302	Topsoil	Apr-23	10	0.12	21	25	29	< 0.10	18	91
186	0.0-0.15	3260600.303	Topsoil	Apr-23	11	0.11	22	24	28	< 0.10	19	95
187	0.0-0.15	3260600.304	Topsoil	Apr-23	11	0.13	22	30	31	< 0.10	19	99
188	0.0-0.15	3260600.305	Topsoil	Apr-23	11	0.13	22	28	30	< 0.10	19	96
189	0.0-0.15	3260600.306	Topsoil	Apr-23	10	0.13	23	28	30	< 0.10	19	102
190	0.0-0.15	3260600.307	Topsoil	Apr-23	10	0.11	22	27	28	< 0.10	18	92
191	0.0-0.15	3260600.308	Topsoil	Apr-23	9	0.12	21	32	28	< 0.10	18	91
192	0.0-0.15	3260600.309	Topsoil	Apr-23	10	0.11	22	33	29	< 0.10	19	92
193	0.0-0.15	3260600.310	Topsoil	Apr-23	11	0.12	23	25	28	< 0.10	19	92
194	0.0-0.15	3260600.311	Topsoil	Apr-23	11	0.12	22	25	27	< 0.10	18	87
195	0.0-0.15	3260600.312	Topsoil	Apr-23	13	0.12	23	24	29	< 0.10	19	89
196	0.0-0.15	3260600.313	Topsoil	Apr-23	12	0.14	23	29	27	< 0.10	19	94
197	0.0-0.15	3260600.314	Topsoil	Apr-23	10	0.11	22	28	27	< 0.10	18	91
198	0.0-0.15	3260600.315	Topsoil	Apr-23	11	0.13	22	27	34	< 0.10	18	99
213	0.0-0.15	3260600.316	Topsoil	Apr-23	10	0.12	21	25	28	< 0.10	17	89
214	0.0-0.15	3260600.317	Topsoil	Apr-23	10	0.12	20	24	28	< 0.10	18	97
215	0.0-0.15	3260600.318	Topsoil	Apr-23	10	0.15	19	55	26	< 0.10	16	89
216	0.0-0.15	3260600.319	Topsoil	Apr-23	10	< 0.10	18	31	24	< 0.10	15	82
217	0.0-0.15	3260600.320	Topsoil	Apr-23	9	0.1	19	26	26	< 0.10	16	85
218	0.0-0.15	3256371.550	Topsoil	Apr-23	10	0.11	21	26	26	< 0.10	16	83
219	0.0-0.15	3256371.490	Topsoil	Apr-23	9	0.1	19	33	22	< 0.10	15	75
220	0.0-0.15	3256371.590	Topsoil	Apr-23	8	0.1	18	41	22	< 0.10	15	74
221	0.0-0.15	3256371.500	Topsoil	Apr-23	11	0.17	19	66	26	< 0.10	16	96
222	0.0-0.15	3256371.600	Topsoil	Apr-23	7	0.1	17	56	20	< 0.10	14	73
223	0.0-0.15	3256371.540	Topsoil	Apr-23	10	0.13	19	50	27	< 0.10	17	88
224	0.0-0.15	3256371.530	Topsoil	Apr-23	9	0.12	21	81	28	< 0.10	17	90
225	0.0-0.15	3256371.520	Topsoil	Apr-23	8	0.13	19	104	24	< 0.10	15	98
228	0.0-0.15	3256371.610	Topsoil	Apr-23	8	0.14	18	44	26	< 0.10	15	93
229	0.0-0.15	3256371.630	Topsoil	Apr-23	10	0.1	21	28	28	< 0.10	17	89
230	0.0-0.15	3256371.510	Topsoil	Apr-23	11	0.11	21	27	28	< 0.10	18	90
247	0.0-0.15	3256371.580	Topsoil	Apr-23	10	0.11	20	43	27	< 0.10	18	87
248	0.0-0.15	3256371.640	Topsoil	Apr-23	8	0.13	20	43	25	< 0.10	16	88
249	0.0-0.15	3256371.480	Topsoil	Apr-23	9	0.15	20	75	39	< 0.10	17	114
250	0.0-0.15	3256371.620	Topsoil	Apr-23	9	0.15	20	40	26	< 0.10	17	93
251	0.0-0.15	3256371.560	Topsoil	Apr-23	6	0.14	16	24	23	< 0.10	13	112
252	0.0-0.15	3256371.570	Topsoil	Apr-23	6	0.15	16	30	26	< 0.10	14	110
254-3	0.0-0.15	3256371.230	Topsoil	Apr-23	10	0.15	21	30	29	< 0.10	18	98

1. ECan (2007). Background concentrations of selected trace elements in Canterbury Soils. Christchurch Gley Recent Soils, Level 2-Table 2.
 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. Australian and New Zealand Guidelines for Fresh and Marine Water Quality Guidelines. Recommended default guideline values for toxicants in sediment. Guideline values - High.

BOLD Value exceeds the adopted background concentration
BOLD: Value exceeds the ANZG-GV-high criteria/adopted background concentration
ND Not detected
 - Not analysed

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	
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			3260600.257	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	
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	0.0031	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. 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 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	
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			3260600.272	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	
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	0.0031	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. 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.

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	3260600.3	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	< 0.013	0.014	< 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	0.0031	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. 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.

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	0.0031	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. 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.

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	0.0031	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. 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.

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 (10%) 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	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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.09	< 0.08	< 0.08	
Dieldrin	0.0031	2.6	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 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	< 0.014	< 0.013	< 0.013	

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.

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



Certificate of Analysis

Page 1 of 4

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



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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
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

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	75
Heavy Metals with Mercury, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	10	11	11	10
Total Recoverable Cadmium	mg/kg dry wt	0.12	0.11	0.13	0.13
Total Recoverable Chromium	mg/kg dry wt	21	22	22	23
Total Recoverable Copper	mg/kg dry wt	25	24	30	28
Total Recoverable Lead	mg/kg dry wt	29	28	31	30
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	18	19	19	19
Total Recoverable Zinc	mg/kg dry wt	91	95	99	102

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

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



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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

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

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



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:	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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