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Delineation Assessment of Organochlorine Soil impacts (114 Newdegate Street, Greenslopes QLD)

Prepared for
Department of Veterans' Affairs

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3 December 2019

754-BNEEN234351

R01

Quality information

Revision history

Revision	Description	Date	Originator	Reviewer	Approver
R01a	Draft	24/10/2019	Anum Haider	Matthew Chenery	Matthew Chenery
R01	Final	03/12/2019	Anum Haider	Matthew Chenery	Matthew Chenery

Distribution

Report Status	No. of copies	Format	Distributed to	Date
Draft	1	PDF	Department of Veteran Affairs	25/10/2019
Final	1	PDF	Department of Veteran Affairs	03/12/2019

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1. Introduction

The Department of Veterans' Affairs (DVA) commissioned Coffey Services Australia Pty Ltd (Coffey) to undertake a delineation assessment of previously identified organochlorine soil impacts on the property located at 114 Newdegate Street, Greenslopes, Queensland. The site locality plan is presented in attached **Figure 1**.

1.1. Objective

The objective of this investigation was to provide additional delineation and characterisation of the previously identified organochlorine impacted locations to assist with Commonwealth approvals under the Environment Protection and Biodiversity Conservation Act 1999, associated with the demolition, remediation and disposal of the property.

1.2. Scope of work

To achieve the abovementioned objective the following scope of work was undertaken.

- Preparation of a site-specific Health and Safety Plan.
- Mobilisation of appropriately experienced contaminated land scientists and required sampling equipment to the site.
- Inspection of the site and review of dial before you dig plans to assess potential site safety risks and completion of relevant site safety documentation.
- Measure out and mark out soil sample locations. Sample location plan is presented in attached **Figure 2**.
- Collection of soil samples using laboratory provided glass jars appropriate for required analyses, samples were collected from surface and underlying soils (nominally 250-500mm below surface depending on access and soil type) from:
 - 17 locations (including sample numbers 1 through to 12 and 14 through to 18) that provide additional lateral delineation of the identified organochlorine impacted zone; one of the proposed locations (13) was inaccessible as the area was sealed with concrete;
 - the five locations (sample numbers 6P, 7P, 9P, 13P and 14P) where the previous investigation identified organochlorine impacts above the nominated investigation levels to provide confirmation of the analytical results and allow collection of samples from underlying soil profiles to assist with vertical delineation; and
 - surface soil samples from 17 locations (including sample numbers 19 through to 36) were collected for delineation purposes. Seven of these locations were selected prior to field works and the rest were selected on site based on the field observations and soil types encountered.
- Soil samples were collected using decontaminated hand tools and laboratory grade detergent solution was used to decontaminate and deionised water was used to rinse hand tools between each location to avoid cross contamination.
- Collection of quality control samples including, duplicates, splits, field rinsate and field blank.
- Samples were preserved in the insulated chilled containers while on site and during transit to the laboratory.

- Preparation/extraction and analysis of samples at National Association of Testing Authority (NATA) certified laboratories for:
 - 46 selected samples were analysed for this total organochlorine pesticides (organochlorine pesticides).
 - Two selected samples were analysed for polycyclic aromatic hydrocarbons (PAHs) and metals including arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc based on field observations.
 - 12 leachate samples were analysed for leachable organochlorine pesticides via toxicity characteristic leaching procedure (TCLP).
- Interpretation of the analytical results against the National Environment Protection (Assessment of Site Contamination) Measure (1999 Rev:2013) (ASC NEPM) and preparation of this report.

It should be noted that at the time of investigation the site infrastructure including concrete slabs, the main hall and accommodation building was in place, which restricted access to underlying soil and the available sample collection methodology.

2. Site information

2.1. Site identification

Site identification details are provided in Table 2-1. The site location is presented on **Figure 1**.

Table 2-1: Site Identification Details

Item	Detail
Site Address	114 Newdegate Street, Greenslopes QLD
Lot/Plan Number	Lot 123 on RP46047 Lot 124 on RP46047 Lot 125 on RP46047
Current Zoning	NC Neighbourhood Centre ¹
Local Council	Brisbane City Council
Total Site Area	Approximately 1,933 m ²
Site Owner	The site is currently owned by Department of Veterans Affairs.
Land Use	The property is currently consisted of disused main hall and accommodation building.
Surrounding Land Uses	North – Residential houses and small cafeteria East – Residential houses South – Residential houses West – Health care (Greenslopes Hospital)

¹ Brisbane City Plan 2014

Neighbourhood centre is a small mix of land uses to service residential neighbourhoods. It includes small-scale convenience shopping, professional offices, community services and other uses that directly support the immediate community.

2.2. Site background

Coffey undertook a site investigation at the site in 2013. The investigation identified five shallow soil sample locations with organochlorine pesticide concentrations (chlordane - max concentration 140mg/kg and Aldrin + dieldrin - max concentration 506mg/kg) that exceeded the nominated investigation levels for standard residential sites.

The investigation also identified asbestos containing materials at the surface (which were removed by the investigation) and two soil samples that contained concentrations of zinc above the nominated environmental investigation levels.

3. Methodology

The methodology adopted for the investigation was in general accordance with the National Environment Protection Council (1999) National Environment Protection (Assessment of Site Contamination) Measure (rev: 2013) (ASC NEPM), which is the adopted Queensland and Commonwealth guideline for the assessment of contaminated sites.

The investigation was overseen by a suitably qualified person under the Queensland Environmental Protection Act (1994) for the assessment of contaminated sites.

3.1. Soil sampling

Soil samples were collected on 01 October 2019 in accordance with the methodology outlined below in Table 3-1.

Table 3-1: Summary of soil sampling methodology

Activity	Detail / Comment
Sample collection	<p>Soil samples were collected from each location by collecting hand trowel and hand auger cuttings. Where possible, samples were collected at depths of 0.0-0.1 and 0.25-0.5 mbgs or when a change in lithology was observed. Surface soil samples were collected using a hand trowel.</p> <p>Sample collection was undertaken in accordance with AS4482.1-2005. Dedicated disposable nitrile gloves were used for soil sample collection. Samples were placed in laboratory prepared sample containers and appropriately sealed.</p>
Reusable sampling equipment	<p>Non-disposable sampling equipment was decontaminated between each location to minimise the possibility of cross contamination between samples and to minimise the risk of impacting sample integrity. Non-disposable sampling equipment used as part of this investigation included hand auger and hand trowel.</p> <p>The decontamination process included:</p> <ul style="list-style-type: none"> • removal of adhered materials using brushes; • washing of the equipment with laboratory grade detergent solution; and • rinsing with de-ionised water. <p>Appropriateness of the decontamination procedure adopted was confirmed through collection and analysis of rinsate sample.</p>
Sample preservation	<p>Samples were placed in laboratory supplied jars and were stored in insulated chilled containers while on site and in transit to the laboratory.</p>
Sample submission	<p>COC documentation was completed at the time of sample collection and accompanied the samples to the laboratory. The record of COC is attached with laboratory certificates in Error! Reference source not found.D.</p>
Sample analysis	<p>Samples were submitted to NATA accredited laboratories for analysis. Eurofins MGT were used as the primary laboratory and ALS Environmental (ALS) was the</p>

Activity	Detail / Comment
	nominated secondary laboratory. Based on the field observations a total of 46 primary soil samples were selected for laboratory analyses.
Analytical Suite	<p>A total of 46 soil samples were analysed for:</p> <ul style="list-style-type: none"> Organochlorine pesticides (OCPs). <p>A total of two soil samples were analysed for:</p> <ul style="list-style-type: none"> Polyaromatic hydrocarbons (PAH); and Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc). <p>A total of twelve leachate samples were analysed for:</p> <ul style="list-style-type: none"> Leachable organochlorine pesticides via toxicity characteristic leaching procedure (TCLP).

3.2. Quality assurance and quality control (QAQC) program

For quality assurance and quality control purposes, the methods used during soil sampling are summarised below in Table 3-2:

Table 3-2: QAQC Program

Activity	Detail / Comments
Reproducibility of sampling and analytical methods	<p>Duplicate samples were collected at a frequency of at least one sample per twenty samples collected (5%). The analytical results of the duplicate samples were compared to the primary samples to assess the precision of the sampling protocol and to provide an indication of variation in the sample source and reproducibility of the analytical results.</p> <p>Split samples were collected at a frequency of at least one sample per twenty samples collected (5%). The analytical results of the split samples were compared with the primary sample to assess the precision of the sampling protocol, provide an indication of variation in the sample source and to assess the accuracy of the primary laboratory</p> <p>Four duplicate samples (QC01, QC03, QC07 and QC09) and four split samples (QC02, QC04, QC08 and QC10) were collected and analysed as part of this QAQC program.</p>
Rinsate samples	<p>One rinsate sample (QC06) was collected (at a rate of one per day per equipment) to assess the decontamination procedures of the sampling equipment used for the collection of the soil samples. The rinsate was collected off the hand auger to assess whether the equipment used was a potential source of contamination identified in the soil samples collected as part of this investigation.</p>
Field blanks	<p>One field blank samples (QC05) was collected and analysed to assess the potential for site conditions to influence the concentrations of contaminants reported in samples.</p>
Samples chain of custody (COC)	<p>Sample details were recorded on COC carefully. All quality control samples were labelled without reference to the parent sample on the sample container and COC to ensure analytical results were not biased by the laboratories. COC documentation was completed at the time of sample collection and accompanied the samples to the laboratory.</p>
Selected laboratories	<p>All laboratories used were NATA accredited for the analyses undertaken. Primary soil samples, duplicate, field blank and rinsate samples were submitted to Eurofins MGT for analysis. The split samples were submitted to ALS Environmental for analysis.</p>

Activity	Detail / Comments
Laboratory QAQC	The accuracy and precision of laboratory QC results were measured by percentage recovery, relative percentage difference (RPD), method blank value, duplicate, laboratory control control, matrix spike, and surrogate recovery. Definitions and acceptance targets for these measures are detailed in the laboratory reports contained in Appendix D .

4. Nominated investigation levels

The nominated investigation levels (ILs) adopted for this investigation have been selected for the assessed contaminants based on the land use zone², onsite previous land use for community purposes and on surrounding properties and the environmental setting.

The site is located in 'NC neighbourhood zone' and is immediately surrounded by 'NC neighbourhood zone' to the north, 'CR character residential' to the east, 'CF community facilities' to the west and 'LMR low to medium density residential' to the south. The site and surrounds land use zone has been accessed from the Brisbane City Plan 2014 and included in **Appendix E**.

Therefore, the adoption of ILs developed for low density residential premises were considered to be the most appropriate approach to assess potential contaminated land risks to human and ecological receptors.

Based on field observations, the predominant overlying soil type encountered during sampling was clay and the extent of soil investigation was less than one meter deep. Therefore, for the purpose of this investigation ILs have been selected for clay 0-<1m.

4.1. Organochlorine pesticides

The nominated ILs for organochlorine pesticides in soil have considered both human health and the environment and are presented in following Table 4-1.

Table 4-1: Nominated Investigation Levels (organochlorine pesticides)

Organochlorine Species	ASC NEMP (2013) Health-based Investigation Levels – HIL A Residential Land Use (mg/kg)	ASC NEMP (2013) Environmental Investigation Levels – EIL Urban Residential and Public Open Space (mg/kg)
Aldrin + Dieldrin	6	NE
Chlordane	50	NE
DDT	NE	180
DDT + DDE + DDD	240	NE
Endosulfan	270	NE
Endrin	10	NE
Heptachlor	6	NE
Hexachlorobezene (HCB)	10	NE

² Brisbane City Plan 2014

Organochlorine Species	ASC NEMP (2013) Health-based Investigation Levels – HIL A Residential Land Use (mg/kg)	ASC NEMP (2013) Environmental Investigation Levels – EIL Urban Residential and Public Open Space (mg/kg)
Methoxychlor	300	NE
Toxaphene	20	NE

NE = Not established

4.2. Polycyclic aromatic hydrocarbons

The nominated ILs for PAHs in soil have considered both human health and the environment and are presented in following Table 4-2.

Table 4-2: Nominated Investigation Levels (PAHs)

PAH Species	ASC NEMP (2013) Health-based Investigation Levels – HIL A Residential Land Use (mg/kg)	ASC NEMP (2013) Environmental Investigation Levels – EIL Urban Residential and Public Open Space (mg/kg)	ASC NEMP (2013) Health-based Screening Levels – HSL A/B Residential Land Use 0-<1m Clay (mg/kg)	ASC NEMP (2013) Environmental Screening Levels – ESL Urban Residential and Public Open Space (mg/kg dry soil)
BaP TEQ	3	NE	NE	NE
Benzo(a)pyrene	NE	NE	NE	0.7
Naphthalene	NE	170	5	NE
Total PAHs	300	NE	NE	NE

NE = Not established

4.3. Metals

The nominated ILs for metals in soil have considered both human health and the environment and are presented in following Table 4-3.

Table 4-3: Nominated Investigation Levels (Heavy Metals)

Metal	ASC NEMP (2013) Health-based Investigation Levels – HIL A Residential Land Use (mg/kg)	ASC NEMP (2013) Environmental Investigation Levels (EIL)		
		Average Concentration of Background Samples (mg/kg)	Added Contaminant Level - based on CEC of 20, pH of 6 and clay content of 1% (mg/kg)	Urban Residential and Public Open Space (mg/kg)
Arsenic	100	NA	NA	100
Cadmium	20	NE	NE	NE
Chromium*	100		190	
Copper	6,000		190	

Metal	ASC NEMP (2013) Health-based Investigation Levels – HIL A Residential Land Use (mg/kg)	ASC NEMP (2013) Environmental Investigation Levels (EIL)		
		Average Concentration of Background Samples (mg/kg)	Added Contaminant Level - based on CEC of 20, pH of 6 and clay content of 1% (mg/kg)	Urban Residential and Public Open Space (mg/kg)
Lead	300	NA	NA	1,100
Mercury**	10	NE	NE	NE
Nickel	400		270	
Zinc	7400		400	

* = Health based investigation level for the more toxic Chromium VI species used, however the analytical results are for total chromium.

** = Health based investigation levels for the more toxic methyl mercury used, however analytical results are for total mercury.

NE = Not established

NA = Not Applicable

4.4. Landfill acceptance - organochlorine pesticides

For assessing suitability for soil disposal in Queensland landfills, the total and leaching analytes (organochlorine pesticides) concentrations were compared with allowable leaching contaminants levels for clay lined and double lined landfills from Department of Environment and Science (2017) Environmental Protection (Waste ERA Framework) ERA 60 Waste Disposal (update 2019). Allowable concentrations of organochlorine pesticides are presented in following Table 4-4:

Table 4-4: Allowable leaching contaminant levels (TCLP) for Queensland Landfills

Organochlorine Species	Allowable leaching contaminant levels (TCLP) for clay lined landfills (mg/L)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/L)
TCLP Derived Leachate Acceptance Criteria (mg/L)		
Aldrin	0.001	0.01
Chlordane	0.006	0.06
Dieldrin	0.001	0.01
DDT	0.003	0.03
Endrin	0.001	0.01
Heptachlor	0.003	0.03
Methoxychlor	0.1	1
Toxaphene	0.005	0.05
Total concentrations for use as landfill cover material (mg/kg)		
Total organochlorine pesticides	5	50

5. Results

5.1. Field observations

The following observations were noted during fieldworks conducted on site:

- The site consisted of fenced vacant main hall and accommodation buildings with main entrance via gate towards Newdegate Street.
- All utility services to site were disconnected.
- Beneath the buildings (slab on ground and raised on stumps type structures), waste material including cans, bottles, broken glass pieces, dried leaves, bricks and other debris were observed.
- The soil type encountered between surface and ~0.30m bgs was silty CLAY with some gravel (2-5mm), grass, roots, wood pieces and dried leaves.
- The soil type encountered between ~0.30 and ~0.5m bgs was CLAY with some silt and sand with some moisture.
- A slag type gravel (by-product from smelting or similar type operation) was encountered between ~0.25 and 0.5m bgs at two samples locations (6 and 7) located outside the southern boundary of the main hall building. The slag material appeared to have been used as a drainage type fill material behind the retaining wall (see Photographs 6 and 7, **Appendix C**).
- Asbestos containing material (bonded piece of fibro cement type sheeting) was observed at sampling location 10 (see Photograph 8, **Appendix C**).
- No olfactory evidence of contamination were observed during collection of soil samples.
- Sampling location 13 was not accessible due to the area being sealed with concrete.

Photos of the site taken during the works are included in **Appendix C**.

5.2. Analytical results

5.2.1. Organochlorine pesticides

A total of 46 primary soil samples (excluding QC samples) were analysed for organochlorine pesticides. Refer to attached **Table 01** in Appendix B for the analytical results and attached **Figure 2** in Appendix A for the sampling locations. Certified laboratory reports are presented in **Appendix D**.

Table 5-1 provides a summary of the analytical results exceeding nominated investigation levels adopted for this investigation.

Table 5-1: Results exceeding nominated investigation levels for organochlorine pesticides

Organochlorine Species	Range of Results	Samples Exceeding ILs	
		Health-based Investigation Levels – HIL A Residential Land Use	Environmental Investigation Levels – EIL Urban Residential and Public Open Space
Aldrin + Dieldrin (mg/kg)	<LOR – 109	8-0.0 (23.56) 9-0.0 (60.08) 9P-0.0 (18) 10-0.0 (28.1) 10-0.45 (9.51) 11-0.0 (36.06) 11.0.45 (14) 13P-0.0 (7.5) 13P-0.2 (10) 14P-0.0 (61.1) QC07 (75.9) QC08 (109) 15-0.0 (8.29) 34-0.0 (17.49) 36-0.0 (20)	NE
Chlordane (mg/kg)	<LOR – 16	Nil	NE
DDT (mg/kg)	<LOR – 23	NE	Nil
DDT + DDE + DDD (mg/kg)	<LOR – 26.5	Nil	NE
Endosulfan (mg/kg)	<LOR – 0.26	Nil	NE
Endrin (mg/kg)	<LOR – 1.2	Nil	NE
Heptachlor (mg/kg)	<LOR – 1	Nil	NE

NE = Not established

The assessment of organochlorine pesticides identified that each of the locations (excluding sample 13P) with concentrations above the investigation levels, were collected immediately adjacent to where building structures intersected the ground. 13P was collected from the approximate location of previous sample location HA07 (identified in the 2013 investigated to be impacted with aldrin + dieldrin) beneath the accommodation building and immediately down gradient of the identified impacted area along the accommodation building southern wall. The 12 analysed samples that were not located immediately adjacent to where the building structures intersected the ground, did not identify concentrations of organochlorine pesticides above the nominated investigation levels.

The five sample locations collected along the southern wall of the main hall building, where previous sample locations HA02 and HA03 identified chlordane impacts, did not identify concentrations of contaminants above the nominated investigation levels. However, it should be noted that hand augers used to access soils beneath the surface have T-bar handles that are required to be turned, as such, the sample locations were required to be located approximately 0.5m from the wall along which the samples were collected. Therefore, the organochlorine results indicate organochlorine pesticides are predominantly located immediately adjacent to where building structures intersect the ground. This is consistent with the methods used for the post construction application of organochlorine pesticides, which sprayed the pesticide solution at locations where pests could gain access to the structure.

Photographs of selected sample locations are contained in **Appendix C**.

5.2.2. Polyaromatic hydrocarbons

Field observation of soil types during sample collection identified a slag type gravel material that had been used as fill material on the outside of the southern wall of the main hall building. To assist with the assessment of potential contamination, two primary soil samples (6-0.45 and 7-0.45) of the slag material were analysed for polyaromatic hydrocarbons. Refer to attached **Table 02** in **Appendix B** for the analytical results and attached **Figure 2** in **Appendix A** for the sampling locations. Certified laboratory reports are presented in **Appendix D**. Both samples were reported with concentrations of polyaromatic hydrocarbons below the nominated investigation levels adopted for this investigation.

5.2.3. Metals

Two primary soil samples (6-0.45 and 7-0.45) of the slag fill material were analysed for metals including arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc. Refer to attached **Table 03** in **Appendix B** for the analytical results and attached **Figure 2** in **Appendix A** for the sampling locations. Certified laboratory reports are presented in **Appendix D**. Both samples were reported with concentrations of cadmium, chromium and mercury below the laboratory's limit of reporting. Both samples were reported with detectable concentrations of arsenic, copper, lead, nickel and zinc below the nominated investigation levels adopted for this investigation.

5.2.4. Landfill acceptance - organochlorine pesticides

A total of 12 selected samples (reported with highest concentrations of organochlorine pesticides) were analysed for leachable organochlorine pesticides via toxicity characteristic leaching procedure (TCLP) in order to assess suitability for soil disposal to Queensland landfills. Table 5-2 provides a summary of the analytical results exceeding allowable organochlorine pesticides landfill acceptance criteria adopted for this investigation

Table 5-2: Results exceeding allowable organochlorine pesticides levels for Queensland landfills

Organochlorine Species	Range of Results	Samples exceeding allowable OCPs levels	
		Allowable contaminant levels for clay lined landfills	Allowable contaminant levels for double lined landfills
Aldrin (mg/L) [#]	<LOR	Nil	Nil
Dieldrin (mg/L) [#]	<LOR – 0.02	8-0.0 (0.002) 9-0.0 (0.01) 10-0.0 (0.004) 14P-0.0 (0.003) 15-0.0 (0.002) 36-0.0 (0.004)	11-0.0 (0.02) 34-0.0 (0.012)
Chlordane (mg/L) [#]	<LOR	Nil	Nil
DDT (mg/L) [#]	<LOR	Nil	Nil
Endrin (mg/L) [#]	<LOR	Nil	Nil
Heptachlor (mg/L) [#]	<LOR	Nil	Nil
Methoxychlor (mg/L) [#]	<LOR	Nil	Nil
Toxaphene (mg/L) [#]	<LOR	Nil	Nil

Organochlorine Species	Range of Results	Samples exceeding allowable OCPs levels		
		Allowable contaminant levels for clay lined landfills	Allowable contaminant levels for double lined landfills	
Total Organochlorine pesticides (mg/kg)*	<LOR- 1,033.38mg/kg	SS01 (14.37)	7-0.0 (21.44)	HA02 (53.41)
		SS02 (20.58)	8-0.0 (47.67)	HA03 (145.41)
		SS04 (10.69)	9-0.0 (122.01)	HA07 (58.79)
		HA01 (34.45)	10-0.0 (56.76)	HA09 (112.28)
		HA02 (53.41)	10-0.45 (19.36)	HA10 (1,033.38)
		HA03 (145.41)	11-0.0 (74.48)	9-0.0 (122.01)
		HA04 (5.18)	11-0.45 (28.89)	10-0.0 (56.76)
		HA06 (10.79)	12-0.0 (10)	11-0.0 (74.48)
		HA07 (58.79)	13P-0.0 (15.81)	14P-0.0 (123.83)
		HA09 (112.28)	13P-0.2 (20.26)	32-0.0 (53.7)
		HA10 (1,033.38)	14P-0.0 (123.83)	
		HA11 (44.29)	14P-0.42 (7.72)	
		2-0.0 (6.16)	15-0.0 (25.12)	
		4-0.0 (8.82)	18-0.0 (13.92)	
		5-0.0 (16.4)	32-0.0 (53.7)	
		6-0.0 (7.39)	34.7-0.0 (38.7)	
		6P-0.0 (5.36)	36-0.0 (40.7)	

- TCLP derived leachate result

* - total (not leachate) concentrations for use as coverage material, includes results from 2013 investigation.

The leachate analytical results indicate that leachable concentrations of dieldrin within eight samples was above the acceptance criteria for clay lined landfills and within two samples was above the acceptance criteria for double lined landfills. The total concentrations of organochlorine pesticides results also exceeded the total allowable concentrations for use of the soil as coverage material at the landfills.

It should be noted that leachate analyses were specifically undertaken on those samples with the highest concentrations of total organochlorine pesticides in the 2019 samples and therefore represent the worst case scenario for leachate generation. The 95% upper confidence level (UCL) of these selected samples for leachable dieldrin results was 0.003mg/L, which was above the acceptance criteria for clay lined landfills but below the acceptance criteria for double lined landfills. Therefore, it is recommended that as part of any remediation of the organochlorine pesticide contaminated material, the impacted material be excavated and stockpiled on site for characterisation to assess disposal/treatment options. Excavation and stockpiling of the material will result in some homogenisation and assessment of the stockpiles would be more representative of actual total and leachable concentrations within the impacted material to be disposed off-site.

5.3. QAQC analytical results

5.3.1. Field quality control

For the purpose of this investigation, the following acceptance criteria for field and laboratory assurance/control results have been adopted.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30%; however the following acceptance guidelines are equally adopted.

- Results <10 times the LOR: No Limit.
- Results between 10-20 times the LOR: RPD must lie between 0-50%.
- Results >20 times the LOR: RPD must lie between 0-30%.
- Surrogate Recoveries: Recoveries must lie between 50-150%.

The results of the quality control samples and relative percentage differences can be found in attached **Table 05** in **Appendix B**.

Four pairs of duplicate and split samples were collected for analysis. Duplicate and split analysis collection exceeded the recommended rate of 1:20 for the primary samples selected for laboratory analysis.

The primary, duplicate, and split sample combination is listed below in Table 5-3.

Table 5-3: Summary of Groundwater QC combinations

Primary Sample	Duplicate	Laboratory	Split	Laboratory
2-0.0	QC01	Eurofins MGT	QC02	ALS Environmental
2-0.3	QC03	Eurofins MGT	QC04	ALS Environmental
14P-0.0	QC07	Eurofins MGT	QC08	ALS Environmental
14P-0.42	QC09	Eurofins MGT	QC10	ALS Environmental

A review of the 188 RPD results indicated the calculated RPDs for 12 results were outside of the nominated accepted criteria for the investigation. The identified exceedances are summarised in Table 5-4.

Table 5-4: RPDs outside accepted criteria

Primary Sample	Duplicate / Split	Duplicate / Split Laboratory	Analyte	RPD %	Explanation
2-0.0	QC01	Eurofins MGT : Eurofins MGT	Chlordane	85	1
	QC02	Eurofins MGT : ALS Environmental	DDT	93	1
			DDT+DDE+DDD	85	1
14P-0.0	QC07	Eurofins MGT : Eurofins MGT	Aldrin	53	1
			Endrin ketone	70	1
			Endrin	64	1
			Other OCPs EPA Vic	75	1
	QC08	Eurofins MGT : ALS Environmental	Aldrin	71	1
			Aldrin + Dieldrin	56	1
			Dieldrin	56	1
			Endrin ketone	83	1
			Endrin	81	1

1. The RPD exceedances identified above are considered to be representative of the heterogeneity of the contaminant distribution within the soil profiles sampled. Both primary and secondary laboratories reported exceedances of the nominated RPD acceptance criteria. Where an RPD exceedance was identified, the primary, duplicate and split sample results were either all above or all below the nominated investigation levels and therefore the identified exceedances do not impact on the conclusions or recommendations drawn.

The rate of collection of duplicates and split samples exceed 5% and therefore, the frequency of field QC sampling is considered acceptable for this investigation.

5.3.2. Equipment rinsate

One equipment rinsate sample was collected (QC06) using the decontaminated hand auger with laboratory supplied distilled water. The rinsate sample was sent to Eurofins MGT and analysed for organochlorine pesticides. All analytes were below the limit of detection.

The equipment rinsate QC results indicate that decontamination procedures were adequate, and the analytical results are suitable for the purpose of this assessment.

5.3.3. Field blank

One field blank samples (QC05) was collected and analysed for organochlorine pesticides. All analytes were below the limit of detection. The field blank results indicate that site conditions did not impact on the quality of the samples and the results are suitable for the purpose of this assessment.

5.3.4. Laboratory QA/QC

Method blank values, laboratory control samples, matrix spikes and surrogate recoveries were within the nominated laboratories NATA approved method limits. Certified laboratory reports are included in **Appendix C**.

6. Conclusions and recommendations

The Department of Veterans' Affairs (DVA) commissioned Coffey Services Australia Pty Ltd (Coffey) to undertake a delineation assessment of previously identified organochlorine soil impacts on the property located at 114 Newdegate Street, Greenslopes, Queensland. The objective of this investigation was to provide additional delineation and characterisation of the previously identified organochlorine impacted locations to assist with Commonwealth approvals under the Environment Protection and Biodiversity Conservation Act 1999, associated with the demolition, remediation and disposal of the property.

The methodology adopted for the investigation was in general accordance with the National Environment Protection Council (1999) National Environment Protection (Assessment of Site Contamination) Measure (rev: 2013) (ASC NEPM).

Based on this investigation, the key findings included:

- At the time of investigation, the site consisted of disused main hall and accommodation building.
- The organochlorine analytical results identified aldrin + dieldrin at concentrations above the nominated investigation levels primarily at locations where the building external walls intersected the ground. This is consistent with the application of pesticides post construction. The 12 organochlorine pesticide analysed samples that were not located immediately adjacent to where the building structures intersected the ground, did not identify concentrations of Organochlorine pesticides above the nominated investigation levels.
- Of the 21 samples collected and analysed for organochlorine pesticides from beneath the surface (0.2 to 0.5m bgs), three samples (10 – 0.45, 11 – 0.45 and 13P – 0.2) reported concentrations of aldrin + dieldrin above the nominated investigation levels. All of these three samples were located adjacent to or immediately down gradient of the southern and western walls of the accommodation building.
- Two samples collected within slag fill material used behind the retaining wall on the southern side of the main hall building were analysed for polyaromatic hydrocarbons and metals. The reported concentrations of both polyaromatic hydrocarbons and metals were below the nominated investigation levels adopted for this investigation.

- Total concentrations of organochlorines were above the acceptance criteria for use of the soil as coverage material at the landfill.
- Leachable dieldrin concentrations were reported in exceedance from the allowable leaching levels for clay lined landfills in six leachate samples and in exceedance of the allowable leaching levels for double lined landfills in two leachate samples. Noting the samples selected for leachate analysis were those with the highest concentrations of organochlorine pesticides and represent a worst-case scenario. However, it should be noted the average and 95% UCL concentrations of leachable dieldrin were below the allowable leaching levels for double lined landfills.

Based on the results of the investigation, Coffey recommend the following:

- Any remediation works should include the excavation, segregation and stockpiling on site of potentially impacted soils. The excavation and stockpiling process will result in some homogenisation of the excavated soil and allow for a statistically valid assessment of the actual soil to be removed from the site. This is the preferred assessment method by the Queensland administering authority from whom the disposal permit for the soil will need to be obtained.
- Remediation works should be planned through the development of a Remediation Plan prior to the disturbance of any soil. It is envisaged the Remediation Plan would include:
 - the excavation of locations identified as containing concentrations of organochlorine pesticides above the nominated investigation level;
 - stockpiling and assessment of excavated soils to provide statistically valid information required to complete a disposal permit application;
 - validation sampling of excavated areas in addition to sampling in areas where access is restricted by current infrastructure on site; and
 - disposal of contaminated soil off site with a disposal permit to a licensed landfill.

Depending on the objectives of the remediation program, a full Contaminated Land Investigation Document and an auditor's certification may be required to allow the property to be removed from the Queensland Environmental Management Register (EMR) or to have a statement of suitability included on the property's EMR listing.

This report must not be reproduced except in full and must be read in conjunction with the attached document entitled Important Information about your Coffey Report regarding advice on the uses and limitations of this document.

Important information about your **Coffey** Environmental Report

Introduction

This report has been prepared by Coffey for you, as Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice.

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Coffey should be kept apprised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statutes and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see

how other professionals have incorporated the report findings.

Given Coffey prepared the report and has familiarity with the site, Coffey is well placed to provide such assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

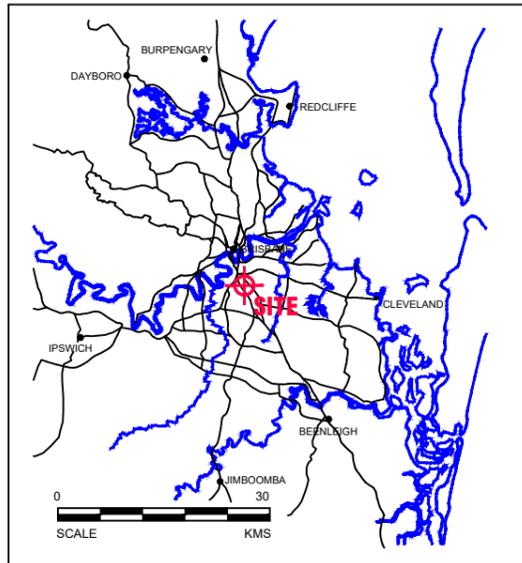
The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

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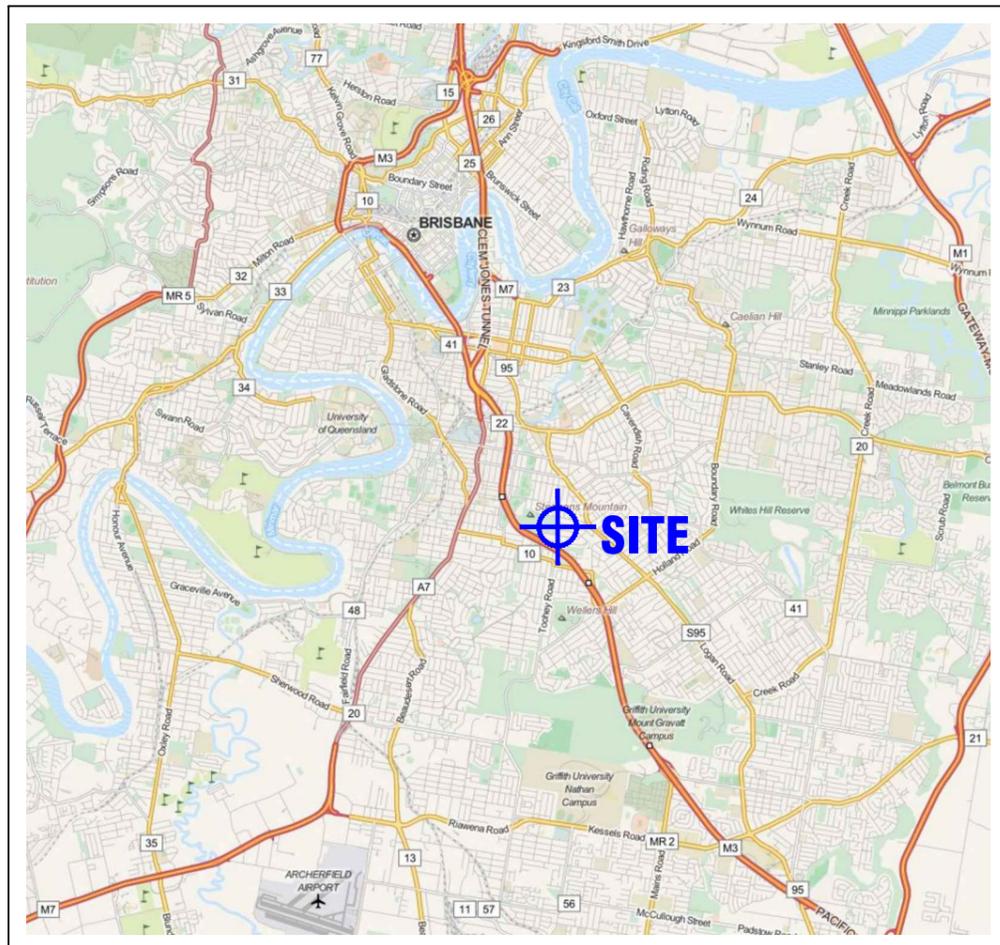
Responsibility

Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

Appendix A – Figures



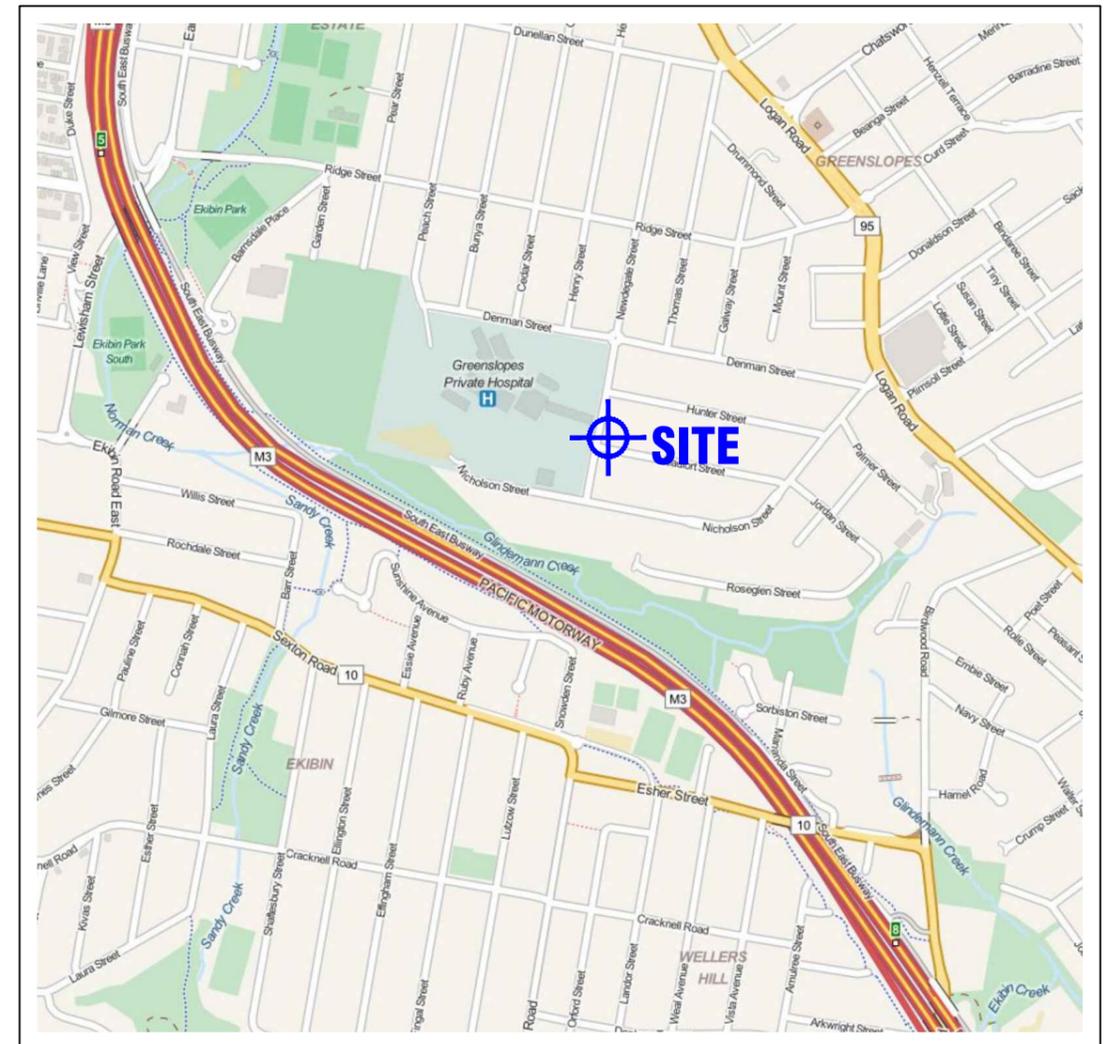
GENERAL AREA MAP



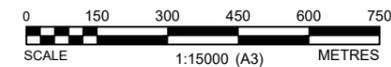
REGIONAL AREA MAP



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LOCAL AREA MAP



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PLOT DATE: 4/12/2019 9:12:34 AM DWG FILE: \\TTSDATA\DATA\ENV\1754-BNEEN234351-1754-BNEEN234351-1754-BNEEN234351-R01A.DWG

no.	description	drawn	approved	date
A	ORIGINAL ISSUE	CGT	AH	04/12/2019

drawn	CGT
approved	AH
date	04/12/2019
scale	AS SHOWN
original size	A3



client:	DEPARTMENT OF VETERAN AFFAIRS		
project:	DELINEATION ASSESSMENT OF ORGANOCHLORINE SOIL IMPACTS 114 NEWDEGATE STREET, GREENSLOPES, QLD		
title:	SITE LOCALITY PLAN		
project no:	754-BNEEN234351-R01A	figure no:	FIGURE 1
rev:	A		



LEGEND	
●	2013 SAMPLE LOCATION
●	2013 SAMPLE LOCATION - ORGANOCHLORINE PESTICIDES ABOVE THE NOMINATED INVESTIGATION LEVELS
+	2019 SAMPLE LOCATION
+	2019 SAMPLE LOCATION - ORGANOCHLORINE PESTICIDES ABOVE THE NOMINATED INVESTIGATION LEVELS
⊕	2019 SURFACE SAMPLE LOCATION - SAMPLES PLACED ON HOLD
	AREA SEALED WITH CONCRETE
	SITE BOUNDARY

PLOT DATE: 4/12/2019 9:12:36 AM DWG FILE: \\TTS\B38\F51\LOCAL\DATA\2\ENV\11_754-BNEEN\234351 - DVA GREENSLOPES\REPORT\APP A - FIGURES\CAD\754-BNEEN\234351-R01A.DWG

no.	description	drawn	approved	date
A	ORIGINAL ISSUE	CGT	AH	04/12/2019

AERIAL IMAGE SOURCE: nearmap.com. date captured 09/08/2019

drawn	CGT
approved	AH
date	04/12/2019
scale	AS SHOWN
original size	A3



client:	DEPARTMENT OF VETERAN AFFAIRS		
project:	DELINEATION ASSESSMENT OF ORGANOCHLORINE SOIL IMPACTS 114 NEWDEGATE STREET, GREENSLOPES, QLD		
title:	SITE FEATURES AND SAMPLE LOCATION PLAN		
project no:	754-BNEEN234351-R01A	figure no:	FIGURE 2
rev:	A		

Appendix B – Tables

				Sample_ID	SS01	SS02	SS03	SS04	HA01	HA02	HA03	HA04	HA05	HA06	HA07	HA08	HA09		
				Sampled_Date	16-07-13	16-07-13	16-07-13	16-07-13	25-09-13	25-09-13	25-09-13	25-09-13	25-09-13	25-09-13	25-09-13	25-09-13	25-09-13		
				Sample_Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal		
				Matrix_Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
Chem_Group	ChemName	unit	LOR	NEPM 2013 Table 1A(1) HILs Res A Soil	NEPM 2013 Table 1B Generic EIL - Urban Residential and Public Open Space														
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05			1.3	<0.05	0.09	<0.05	0.27	0.23	0.57	< 0.05	< 0.05	0.49	0.05	< 0.05	0.07	
	a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	
	Aldrin	mg/kg	0.05			<0.05	<0.05	0.11	<0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.26	< 0.05	0.06	
	Aldrin + Dieldrin	mg/kg	0.05	6		<0.12	<0.25	1.81	1.15	0.21	<0.1	<0.11	<0.1	<0.1	<0.87	28.26	<0.13	55.06	
	b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	chlordane	mg/kg	0.1	50		0.9	20	0.3	8.2	31	51	140	4.7	< 0.1	< 0.1	0.3	< 0.1	0.3	
	d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	DDD	mg/kg	0.05			1.7	<0.05	<0.05	<0.05	0.08	0.09	0.18	< 0.05	< 0.05	0.27	< 0.05	< 0.05	< 0.05	
	DDT	mg/kg	0.05		180		3.7	0.12	0.13	<0.05	1.1	0.73	1.6	0.41	0.12	4.2	0.26	0.13	0.22
	DDT+DDE+DDD	mg/kg	0.05	240		6.7	<0.22	<0.27	<0.15	1.45	1.05	2.35	<0.51	<0.22	4.96	<0.36	<0.23	<0.34	
	Dieldrin	mg/kg	0.05			0.07	0.2	1.7	1.1	0.14	< 0.05	0.06	< 0.05	< 0.05	0.82	28	0.08	55	
	Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	Endrin ketone	mg/kg	0.05			<0.05	<0.05	0.07	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	0.96	< 0.05	0.58	
	Endosulfan I	mg/kg	0.05	270		<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	Endosulfan II	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	Endrin	mg/kg	0.05	10		<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.7	< 0.05	0.93
	g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	Heptachlor	mg/kg	0.05	6		<0.05	<0.05	<0.05	<0.05	0.13	0.08	0.14	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
	Heptachlor epoxide	mg/kg	0.05			<0.05	0.26	<0.05	0.24	< 0.05	0.23	0.51	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	mg/kg	0.05	10		<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Methoxychlor	mg/kg	0.05	300		<0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Toxaphene	mg/kg	1	20		<0.1	<0.1	<0.1	<0.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		

Notes:

LOR = Limit of reporting Eurofins MGT

- = not analysed

mg/kg = milligrams per kilograms

1 Shaded cells exceed NEPM (2013) Health Investigation Levels Table 1A(1) Residential A Soil

2 Shaded cells exceed NEPM (2013) Ecological Investigation Levels Table 1B EILs-Urban Residential and Public Open Space

				Sample_ID	HA10	HA11	1-0.0	1-0.3	2-0.0	2-0.3	3-0.0	3-0.35	4-0.0	4-0.35	5-0.0	5-0.35	6-0.0	6-0.45		
				Sampled_Date	25-09-13	25-09-13	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	
				Sample_Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	
				Matrix_Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Chem_Group	ChemName	unit	LOR	NEPM 2013 Table 1A(1) HILs Res A Soil	NEPM 2013 Table 1B Generic EIL - Urban Residential and Public Open Space															
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05			< 0.5	0.13	0.82	<0.05	0.09	<0.05	0.05	<0.05	0.31	<0.05	1.3	<0.05	0.17	<0.05	
	a-BHC	mg/kg	0.05			-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Aldrin	mg/kg	0.05			86	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Aldrin + Dieldrin	mg/kg	0.05	6		506	<0.44	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	
	b-BHC	mg/kg	0.05			< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	chlordane	mg/kg	0.1	50		5.4	42	0.3	<0.1	5.2	0.2	1.9	<0.1	<0.1	<0.1	<0.1	<0.1	5.5	0.5	
	d-BHC	mg/kg	0.05			< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	DDD	mg/kg	0.05			< 0.05	0.06	0.13	<0.05	<0.05	<0.05	0.27	<0.05	<0.05	<0.05	<0.05	1.5	<0.05	0.06	<0.05
	DDT	mg/kg	0.05		180	< 0.05	0.16	0.9	<0.05	0.33	<0.05	0.59	<0.05	4.1	<0.05	5.4	<0.05	<0.05	<0.05	<0.05
	DDT+DDE+DDD	mg/kg	0.05	240		<0.55	0.35	1.85	<0.05	0.42	<0.05	0.91	<0.05	4.41	<0.05	8.2	<0.05	0.23	<0.05	
	Dieldrin	mg/kg	0.05			420	0.39	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	
	Endrin aldehyde	mg/kg	0.05			< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	
	Endrin ketone	mg/kg	0.05			8.5	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endosulfan I	mg/kg	0.05	270		< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endosulfan II	mg/kg	0.05			< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endosulfan sulphate	mg/kg	0.05			< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin	mg/kg	0.05	10		6.5	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
	g-BHC (Lindane)	mg/kg	0.05			< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor	mg/kg	0.05	6		0.87	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.26	<0.05
	Heptachlor epoxide	mg/kg	0.05			0.11	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.89	0.26
Hexachlorobenzene	mg/kg	0.05	10		< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methoxychlor	mg/kg	0.05	300		< 0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Toxaphene	mg/kg	1	20		< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	

Notes:

LOR = Limit of reporting Eurofins MGT

- = not analysed

mg/kg = milligrams per kilograms

1 Shaded cells exceed NEPM (2013) Health Investigation Levels Table 1A(1) Residential A Soil

2 Shaded cells exceed NEPM (2013) Ecological Investigation Levels Table 1B EILs-Urban Residential and Pul

				Sample_ID	6P-0.0	6P-0.3	7-0.0	7-0.45	7P-0.0	7P-0.25	8-0.0	8-0.42	9-0.0	9-0.42	9P-0.0	9P-0.45	10-0.0	10-0.45	
				Sampled_Date	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19
				Sample_Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
				Matrix_Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Chem_Group	ChemName	unit	LOR	NEPM 2013 Table 1A(1) HILs Res A Soil	NEPM 2013 Table 1B Generic EIL - Urban Residential and Public Open Space														
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05			0.19	<0.05	0.26	<0.05	0.15	<0.05	0.1	<0.05	0.2	<0.05	0.1	<0.05	0.11	0.14
	a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.56	<0.05	0.08	<0.05	<0.05	<0.05	0.1	0.21
	Aldrin + Dieldrin	mg/kg	0.05	6		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	23.56	1.3	60.08	0.36	18	0.13	28.1	9.51
	b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	chlordanane	mg/kg	0.1	50		4.2	0.3	16	0.4	2.3	0.4	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
	d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DDD	mg/kg	0.05			0.06	<0.05	0.08	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DDT	mg/kg	0.05		180	0.33	<0.05	<0.05	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DDT+DDE+DDD	mg/kg	0.05	240		0.58	<0.05	0.34	<0.05	0.37	<0.05	0.1	<0.05	0.2	<0.05	0.1	<0.05	0.11	0.14
	Dieldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	23	1.3	60	0.36	18	0.13	28	9.3
	Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	0.24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.05	0.36	<0.05	<0.05	<0.05	0.13	<0.05
	Endosulfan I	mg/kg	0.05	270		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan II	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endrin	mg/kg	0.05	10		<0.05	<0.05	0.12	<0.05	<0.05	<0.05	0.23	<0.05	0.83	<0.05	0.16	<0.05	0.21	0.06
	g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor	mg/kg	0.05	6		<0.05	<0.05	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	3.4	0.18	0.09	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	10		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methoxychlor	mg/kg	0.05	300		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Toxaphene	mg/kg	1	20		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	

Notes:
LOR = Limit of reporting Eurofins MGT
- = not analysed
mg/kg = milligrams per kilograms

1 Shaded cells exceed NEPM (2013) Health Investigation Levels Table 1A(1) Residential A Soil
2 Shaded cells exceed NEPM (2013) Ecological Investigation Levels Table 1B EILs-Urban Residential and Pul

				Sample_ID	11-0.0	11-0.45	12-0.0	12-0.25	13P-0.0	13P-0.2	14-0.0	14-0.45	14P-0.0	14P-0.42	15-0.0	16-0.0	16-0.45	17-0.0							
				Sampled_Date	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19						
				Sample_Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal						
				Matrix_Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL						
				NEPM 2013 Table 1A(1) HILs Res A Soil	NEPM 2013 Table 1B Generic EIL - Urban Residential and Public Open Space																				
Chem_Group	ChemName	unit	LOR																						
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05						0.34	0.22	0.15	<0.05	0.13	<0.05	<0.05	<0.05	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.18
	a-BHC	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Aldrin	mg/kg	0.05						0.06	<0.05	0.81	0.11	<0.05	<0.05	<0.05	<0.05	1.1	0.06	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Aldrin + Dieldrin	mg/kg	0.05	6					36.06	14	4.31	0.47	7.5	10	0.07	<0.05	61.1	3.86	8.29	<0.05	<0.05	<0.05	<0.05	<0.05	0.62
	b-BHC	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	chlordane	mg/kg	0.1	50					0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	7.4	1.3	<0.1	<0.1	<0.1	<0.1	
	d-BHC	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DDD	mg/kg	0.05						0.18	0.15	0.15	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DDT	mg/kg	0.05						<0.05	<0.05	0.21	<0.05	0.08	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.18
	DDT+DDE+DDD	mg/kg	0.05	240					0.52	0.37	0.51	<0.05	0.32	0.05	<0.05	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.36
	Dieldrin	mg/kg	0.05						36	14	3.5	0.36	7.5	10	0.07	<0.05	60	3.8	8.2	<0.05	<0.05	<0.05	<0.05	<0.05	0.62
	Endrin aldehyde	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endrin ketone	mg/kg	0.05						0.31	0.05	0.28	<0.05	0.17	0.16	<0.05	<0.05	0.58	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan I	mg/kg	0.05	270					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan II	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan sulphate	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endrin	mg/kg	0.05	10					0.73	0.1	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	0.62	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	g-BHC (Lindane)	mg/kg	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor	mg/kg	0.05	6					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor epoxide	mg/kg	0.05						0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	0.38	0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	10					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methoxychlor	mg/kg	0.05	300					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Toxaphene	mg/kg	1	20					<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	

Notes:

LOR = Limit of reporting Eurofins MGT

- = not analysed

mg/kg = milligrams per kilograms

1 Shaded cells exceed NEPM (2013) Health Investigation Levels Table 1A(1) Residential A Soil

2 Shaded cells exceed NEPM (2013) Ecological Investigation Levels Table 1B EILs-Urban Residential and Pul

Table 01
Organochlorine Pesticides Analysis

				Sample_ID	17-0.25	18-0.0	18-0.2	32-0.0	34-0.0	36-0.0	
				Sampled_Date	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	
				Sample_Type	Normal	Normal	Normal	Normal	Normal	Normal	
				Matrix_Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Chem_Group	ChemName	unit	LOR	NEPM 2013 Table 1A(1) HILs Res A Soil	NEPM 2013 Table 1B Generic EIL - Urban Residential and Public Open Space						
Organochlorine Pesticides	4,4-DDE	mg/kg	0.05			<0.05	2.2	0.11	1.4	1	0.07
	a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	0.49	<0.05
	Aldrin + Dieldrin	mg/kg	0.05	6		<0.05	0.61	<0.05	0.3	17.49	20
	b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	chlordane	mg/kg	0.1	50		<0.1	<0.1	<0.1	0.1	<0.1	<0.1
	d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	DDD	mg/kg	0.05			<0.05	0.35	<0.05	2.1	0.15	<0.05
	DDT	mg/kg	0.05		180	<0.05	3.8	0.07	23	0.51	<0.05
	DDT+DDE+DDD	mg/kg	0.05	240		<0.05	6.35	0.18	26.5	1.66	0.07
	Dieldrin	mg/kg	0.05			<0.05	0.61	<0.05	0.3	17	20
	Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	0.22	0.12
	Endosulfan I	mg/kg	0.05	270		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan II	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Endrin	mg/kg	0.05	10		<0.05	<0.05	<0.05	<0.05	0.18	0.11
	g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor	mg/kg	0.05	6		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Hexachlorobenzene	mg/kg	0.05	10		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methoxychlor	mg/kg	0.05	300		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Toxaphene	mg/kg	1	20		<1	<1	<1	<1	<1	<1	

Notes:

LOR = Limit of reporting Eurofins MGT

- = not analysed

mg/kg = milligrams per kilograms

1 Shaded cells exceed NEPM (2013) Health Investigation Levels Table 1A(1) Residential A Soil

2 Shaded cells exceed NEPM (2013) Ecological Investigation Levels Table 1B EILs-Urban Residential and Pul

				Sample_ID	6-0.45	7-0.45			
				Sampled_Date	01-10-19	01-10-19			
				Sample_Type	Normal	Normal			
				Matrix_Type	SOIL	SOIL			
Chem_Group	ChemName	unit	LOR	NEPM 2013 Table 1A(1) HILs Res A Soil	NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay 0-1m	NEPM 2013 Table 1B Generic EIL - Urban Residential and Public Open Space	NEPM 2013 Table 1B(6) ESLs for Urban Residential and Public Open Space		
Inorganics	Moisture Content (dried @ 103°C)	%	1					7.9	8.7
Polynuclear Aromatic Hydrocarbons	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	3				0.6	0.6
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	3				1.2	1.2
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	3				<0.5	<0.5
	Benzo(b+j)fluoranthene	mg/kg	0.5					<0.5	<0.5
	Acenaphthene	mg/kg	0.5					<0.5	<0.5
	Acenaphthylene	mg/kg	0.5					<0.5	<0.5
	Anthracene	mg/kg	0.5					<0.5	<0.5
	Benz(a)anthracene	mg/kg	0.5					<0.5	<0.5
	Benzo(a) pyrene	mg/kg	0.5				0.7	<0.5	<0.5
	Benzo(g,h,i)perylene	mg/kg	0.5					<0.5	<0.5
	Benzo(k)fluoranthene	mg/kg	0.5					<0.5	<0.5
	Chrysene	mg/kg	0.5					<0.5	<0.5
	Dibenz(a,h)anthracene	mg/kg	0.5					<0.5	<0.5
	Fluoranthene	mg/kg	0.5					<0.5	<0.5
	Fluorene	mg/kg	0.5					<0.5	<0.5
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5					<0.5	<0.5
	Naphthalene	mg/kg	0.5		5	170		<0.5	<0.5
	PAHs (Sum of total)	mg/kg	0.5	300				<0.5	<0.5
Phenanthrene	mg/kg	0.5					<0.5	<0.5	
Pyrene	mg/kg	0.5					<0.5	<0.5	

Notes:

LOR = Limit of reporting Eurofins MGT

- = not analysed

mg/kg = milligrams per kilograms

1	Shaded cells exceed NEPM (2013) Health Investigation Levels Table 1A(1) Residential A Soil
2	Shaded cells exceed NEPM (2013): Health Screening Levels Table 1A(3) Res A/B Soil HSL for Vapour Intrusion , 0 to <1m, Clay
3	Shaded cells exceed NEPM (2013): Ecological Investigation Levels Table 1B (1-5) EILs-Urban Residential and Public Open Space
4	Shaded cells exceed NEPM (2013): Ecological Screening Levels Table 1B (6) ESLs-Urban Residential and Public Open Space

Chem_Group	ChemName	unit	LOR	Allowable leaching contaminant levels (TCLP) for clay lined landfills	Allowable leaching contaminant levels (TCLP) for double lined landfills	Sample_ID	6P-0.0	7P-0.0	8-0.0	9-0.0	9P-0.0	10-0.0	11-0.0	13P-0.0	14P-0.0	15-0.0	34-0.0	36-0.0				
						Sampled_Date	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19	01-10-19
						Sample_Type	Leachate															
Inorganics	pH of Leaching Fluid	-	0.1	-	-	5	5	4.9	4.9	5	4.9	4.9	5	5	4.9	4.9	4.9					
	pH (Final)	-	0.1	-	-	4.8	4.8	5.2	4.9	5.3	5	5	5.3	5.4	4.9	5.1	5.1					
	pH (Initial)	-	0.1	-	-	5.5	6.4	6.7	6.4	7	6.6	6	5.5	6.7	6.9	7.1	6.8					
	pH (after HCL)	-	0.1	-	-	1.4	1.5	1.2	1.3	1.5	1.2	1.3	1.4	1.4	1.2	1.3	1.4					
Organochlorine Pesticides	4,4-DDE	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	a-BHC	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Aldrin	mg/L	0.001	0.001	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Aldrin + Dieldrin	mg/L	0.0001			<0.001	<0.001	0.002	0.01	0.001	0.004	0.02	<0.001	0.003	0.002	0.012	0.004					
	b-BHC	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	chlordane	mg/L	0.005	0.006	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005					
	d-BHC	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	DDD	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	DDT	mg/L	0.001	0.003	0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	DDT+DDE+DDD	mg/L	0.0001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Dieldrin	mg/L	0.001	0.001	0.01	<0.001	<0.001	0.002	0.01	0.001	0.004	0.02	<0.001	0.003	0.002	0.012	0.004					
	Endrin aldehyde	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Endrin ketone	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Endosulfan I	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Endosulfan II	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Endosulfan sulphate	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Endrin	mg/L	0.001	0.001	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	g-BHC (Lindane)	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Heptachlor	mg/L	0.001	0.003	0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Heptachlor epoxide	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Hexachlorobenzene	mg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Methoxychlor	mg/L	0.001	0.1	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
	Toxaphene	mg/L	0.005	0.005	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005					
	Organochlorine pesticides EPAVic	mg/L	0.001			<0.005	<0.005	<0.005	0.01	<0.005	<0.005	0.02	<0.005	<0.005	<0.005	0.012	<0.005					
	Other organochlorine pesticides EPAVic	mg/L	0.001			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005					

Notes:

LOR = Limit of reporting Eurofins MGT

- = not analyzed

mg/L = milligrams per litre

1	Shaded cells exceed Department of Environment and Science (2017) ESR/2015/1667, Version 5.01 ERA 60 Waste disposal, Allowable leaching contaminant levels (TCLP) for clay lined landfills
2	Shaded cells exceed Department of Environment and Science (2017) ESR/2015/1667, Version 5.01 ERA 60 Waste disposal, Allowable leaching contaminant levels (TCLP) for double lined landfills

Chem_Group	ChemName	unit	Sample_ID		2-0.0	QC01	RPD	QC02	RPD	2-0.3	QC03	RPD	QC04	RPD	14P-0.0	QC07	RPD	QC08	RPD	14P-0.42	QC09	RPD	QC10	RPD							
			Sampled_Date	01-10-19	01-10-19	01-10-19		RPD		01-10-19	RPD		01-10-19		01-10-19	RPD		01-10-19		RPD	01-10-19		01-10-19		RPD	01-10-19	01-10-19	RPD	01-10-19	01-10-19	RPD
			Sample_Type	Normal	Field_D	%		Interlab_D		%	Normal		Field_D		%	Interlab_D		%		Normal	Field_D		%		Interlab_D	%	Normal	Field_D	%	Interlab_D	%
			Matrix_Type	SOIL	SOIL			SOIL			SOIL		SOIL			SOIL				SOIL	SOIL				SOIL	SOIL		SOIL	SOIL		SOIL
Organochlorine Pesticides	4,4-DDE	mg/kg	LOR (1)	LOR (2)	0.05	0.05		0.14	43	<0.05	<0.05	#	<0.05	#	0.12	0.24	67	<0.05	131	<0.05	<0.05	#	<0.05	#							
	a-BHC	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Aldrin	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	1.1	1.9	53	2.32	71	0.06	0.06	0	<0.05	82							
	Aldrin + Dieldrin	mg/kg	0.05	0.05	0.06	<0.05	82	<0.05	82	<0.05	<0.05	#	<0.05	#	61.1	75.9	22	109	56	3.86	5.06	27	3.08	22							
	b-BHC	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	chlordanane	mg/kg	0.1	0.05	5.2	2.1	85	5.84	12	0.2	<0.1	120	0.23	14	0.1	0.3	100	0.37	115	<0.1	<0.1	#	<0.05	#							
	d-BHC	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	DDD	mg/kg	0.05	0.05	<0.05	0.36	174	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	0.05	67	<0.05	#	<0.05	<0.05	#	<0.05	#							
	DDT	mg/kg	0.05	0.2	0.33	0.06	138	0.9	93	<0.05	<0.05	#	<0.2	#	<0.05	<0.05	#	<0.2	#	<0.05	<0.05	#	<0.2	#							
	DDT+DDE+DDD	mg/kg	0.05	0.05	0.42	0.53	23	1.04	85	<0.05	<0.05	#	<0.05	#	0.12	0.29	83	<0.05	131	<0.05	<0.05	#	<0.05	#							
	Dieldrin	mg/kg	0.05	0.05	0.06	<0.05	82	<0.05	82	<0.05	<0.05	#	<0.05	#	60	74	21	107	56	3.8	5	27	3.08	21							
	Endosulfan	mg/kg	-	0.05	-	-	-	<0.05	-	-	-	-	<0.05	-	-	-	-	<0.05	-	-	-	-	<0.05	-							
	Endrin aldehyde	mg/kg	0.05	0.05	<0.05	0.05	67	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Endrin ketone	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	0.58	1.2	70	1.4	83	<0.05	<0.05	#	<0.05	#							
	Endosulfan I	mg/kg	0.05	0.05	<0.05	0.05	67	<1.02	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Endosulfan II	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Endosulfan sulphate	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Endrin	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	0.62	1.2	64	1.47	81	<0.05	<0.05	#	<0.05	#							
	g-BHC (Lindane)	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Heptachlor	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	0.06	82	0.16	146	<0.05	<0.05	#	<0.05	#							
	Heptachlor epoxide	mg/kg	0.05	0.05	<0.05	<0.05	#	0.06	82	<0.05	<0.05	#	<0.05	#	0.09	0.22	84	0.22	84	<0.05	<0.05	#	<0.05	#							
	Hexachlorobenzene	mg/kg	0.05	0.05	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#	<0.05	<0.05	#	<0.05	#							
	Methoxychlor	mg/kg	0.05	0.2	<0.05	<0.05	#	<0.2	#	<0.05	<0.05	#	<0.2	#	<0.05	<0.05	#	<0.2	#	<0.05	<0.05	#	<0.2	#							
	Toxaphene	mg/kg	1	-	<1	<1	#	-	-	<1	<1	#	-	-	<1	<1	#	-	-	<1	<1	#	-	-							

Notes:

LOR (1) = Limit of reporting Eurofins MGT
LOR (2) = Limit of reporting ALS Environmental
- = not analysed
mg/kg = milligrams per kilograms

x	Highlighted values indicates RPD exceeds nominated criteria
#	Both primary or quality control samples are below the limit of reporting

Nominated Criteria for RPD:
Results <10 times the LOR: No Limit.
Results between 10-20 times the LOR: RPD must lie between 0-50%.
Results >20 times the LOR: RPD must lie between 0-30%.

			Sample_ID	QC05	QC06
			Matrix_Type	WATER	WATER
			Sampled_Date	1-10-2019	1-10-2019
			Sample_Type	Field_B	Rinsate
Chem_Group	ChemName	unit	LOR		
Organochlorine Pesticides	4,4-DDE	µg/L	0.1	<0.1	<0.1
	a-BHC	µg/L	0.1	<0.1	<0.1
	Aldrin	µg/L	0.1	<0.1	<0.1
	Aldrin + Dieldrin	µg/L	0.1	0.1	<0.1
	b-BHC	µg/L	0.1	<0.1	<0.1
	chlordan	µg/L	1	<1	<1
	d-BHC	µg/L	0.1	<0.1	<0.1
	DDD	µg/L	0.1	<0.1	<0.1
	DDT	µg/L	0.1	<0.1	<0.1
	DDT+DDE+DDD	µg/L	0.1	<0.1	<0.1
	Dieldrin	µg/L	0.1	0.1	<0.1
	Endrin aldehyde	µg/L	0.1	<0.1	<0.1
	Endrin ketone	µg/L	0.1	<0.1	<0.1
	Endosulfan I	µg/L	0.1	<0.1	<0.1
	Endosulfan II	µg/L	0.1	<0.1	<0.1
	Endosulfan sulphate	µg/L	0.1	<0.1	<0.1
	Endrin	µg/L	0.1	<0.1	<0.1
	g-BHC (Lindane)	µg/L	0.1	<0.1	<0.1
	Heptachlor	µg/L	0.1	<0.1	<0.1
	Heptachlor epoxide	µg/L	0.1	<0.1	<0.1
	Hexachlorobenzene	µg/L	0.1	<0.1	<0.1
	Methoxychlor	µg/L	0.1	<0.1	<0.1
	Toxaphene	µg/L	10	<10	<10
	Organochlorine pesticides EPAVic	µg/L	1	<1	<1
Other organochlorine pesticides EPAVic	µg/L	1	<1	<1	

Notes:

LOR = Limit of reporting Eurofins MGT

µg/L = micrograms per litre

Appendix C – Site Photographs



Photograph 1: Sample location HA10 (2013) and 14P (2019)



Photograph 2: Southern wall of the accommodation building



Photograph 3: Area of exposed soil beneath the main hall southern extent.



Photograph 4: Location of sample location 11 (2019)



Photograph 5: Area beneath Accommodation building from where samples HA07 (2013) and 13P were collected.



Photograph 6: Slag type material encountered in sample location along the external southern wall of the main hall building.



Photograph 7: Area from which the slag material was encountered adjacent to the southern wall of the main hall building.



Photograph 8: Pieces of asbestos containing material identified at sample location 10.

Appendix D - Certified Laboratory Reports



CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 055 521

Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9500 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murame QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Laach Highway Kevdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company		Coffey Services Australia Pty Ltd		Project No		754-BNEEN234351		Project Manager		Matthew Cheney		Sampler(s)		Anum Haider / Matthew Cheney							
Address		5/12 Creek Street Brisbane QLD 4000		Project Name		DVA-Cnr Newgate St and Headford St-Delineation of OCPs		EDD Format		Esdat		Handed over by									
Contact Name		Anum Haider		Analyses Where metals are requested, please specify "Total" or "Filtered". SUITE code must be listed to attract SUITE pricing		OCPs TCUP (OCPs)						HOLD		Email for Invoice		anum.haider@Coffey.com					
Phone No		0426896077												Email for Results		anumhaider@Coffey.com					
Special Directions														Containers		Change container type & size if necessary.		Required Turnaround Time		Default will be 5 days if not ticked.	
Purchase Order														500mL Plastic				<input type="checkbox"/> Overnight (reporting by 9am) ♦ <input type="checkbox"/> Same day ♦ <input type="checkbox"/> 1 day ♦ <input type="checkbox"/> 2 days ♦ <input type="checkbox"/> 3 days ♦ <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()			
Quote ID No																					
No	Client Sample ID	Sampled Date/Time dd/mm/yyyy hh:mm	Matrix Solid (S) Water (W)												Sample Comments / Dangerous Goods Hazard Warning						
1	4-0.35	1/10/19	S	X																	
2	5-0.0			X																	
3	5-0.35			X																	
4	13P-0.0			X	X																
5	13P-0.20			X																	
6	18-0.0			X																	
7	18-0.20			X																	
8	16-0.0			X																	
9	16-0.45			X																	
10	9P-0.0	1/10/19	S	X	X																
Total Counts																					
Method of Shipment		<input checked="" type="checkbox"/> Courier (# 94823) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name		Anum Haider		Signature		[Signature]		Date		2/10/19							
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Temperature									
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Report No									

3 of 7



CHAIN OF CUSTODY RECORD

Eurofins | mgt. ABN 50 005 085 521

Sydney Laboratory
 Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
 02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
 Unit 1 21 Smallwood Place Murarie QLD 4172
 07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
 Unit 2 91 Leach Highway Kewdale WA 6105
 08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
 6 Monterey Road Dandenong South VIC 3175
 03 8564 5000 EnviroSampleVic@eurofins.com

Company		Coffey Services Australia Pty Ltd		Project No		754-BNEEN234351		Project Manager		Matthew Cheney		Sampler(s)		Anum Haider / Matthew Cheney			
Address		5/12 Creek Street Brisbane QLD 4000		Project Name		DVA-Cnr Newgate St and Headford St-Delineation of OCPs		EDD Format		Esdat		Handed over by					
Contact Name		Anum Haider		Analyses Where metals are requested, please specify "Total" or "Filtered" SUITE code must be used to attract SUITE pricing.		OCPs TCLP						Containers Change container type & size if necessary.		Required Turnaround Time Default will be 5 days if not ticked.			
Phone No		0426896077															
Special Directions																	
Purchase Order																	
Quote ID No																	
No	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)												Sample Comments / Dangerous Goods Hazard Warning		
1	9P-0.45	1/10/19	S	X													
2	10-0.0			X													
3	10-0.45			X													
4	8-0.42			X													
5	9-0.42			X													
6	8-0.0			X													
7	9-0.0			X													
8	15-0.0			X													
9	15-0.25			X													
10	14-0.0	1/10/19	S	X													
Total Counts																	
Method of Shipment		<input checked="" type="checkbox"/> Courier (# 94823)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Anum Haider		Signature		Date		Time	
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Temperature		Report No			
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Report No					

HOLD

- Overnight (reporting by 9am) ♦
- Same day ♦
- 1 day ♦
- 2 days ♦
- 3 days ♦
- 5 days (Standard)
- Other()

4047



CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company		Coffey Services Australia Pty Ltd		Project No		754-BNEEN234351		Project Manager		Matthew Cheney		Sampler(s)		Anum Haider/Matthew Cheney	
Address		5/12 Creek Street Brisbane QLD 4000		Project Name		DVA-Cnr Newgate St and Headford St-Delineation of OCPs		EDD Format		Esdat		Handed over by			
Contact Name		Anum Haider		Analyses Where metals are requested, please specify 'Total' or 'Filtered' SUIITE code must be used to attract SUIITE pricing.		OCPs		TCLP		PAHs		Metal (8 metals)		HOLD	
Phone No		0426896077													
Special Directions															
Purchase Order												Containers Change container type & size if necessary		Required Turnaround Time Default will be 5 days if not ticked.	
Quote ID No														<input type="checkbox"/> Overnight (reporting by 9am) ♦ <input type="checkbox"/> Same day ♦ <input type="checkbox"/> 1 day ♦ <input type="checkbox"/> 2 days ♦ <input type="checkbox"/> 3 days ♦ <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()	
No	Client Sample ID	Sampled Date/Time dd/mm/yy hh.mm	Matrix Solid (S) Water (W)												Sample Comments / Dangerous Goods Hazard Warning
1	14-0.45	1/10/19	S	X											
2	14P-0.0			X	X										
3	11-0.0			X											
4	11-0.45			X											
5	6-0.0			X											
6	6-0.45			X	X	X									
7	7-0.0			X											
8	7-0.45			X	X	X									
9	27-0.0											X			
10	28-0.0	1/10/19	S									X			
Total Counts															
Method of Shipment		<input checked="" type="checkbox"/> Courier (# 94823) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name		Anum Haider		Signature		[Signature]		Date		2/10/19	
Time				Time				Time				Time		11:58am	
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Temperature			
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Report No			



CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2056
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
6 Manley Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company		Coffey Services Australia Pty Ltd		Project No		754-BNEEN234351		Project Manager		Matthew Cheney		Sampler(s)		Anum Haider/Matthew Cheney			
Address		5/12 Creek Street Brisbane QLD 4000		Project Name		DVA-Cnr Newgate St and Headford St-Delineation of OCPs		EDD Format		Esdat		Handed over by					
Contact Name		Anum Haider		Analyses Where metals are requested, please specify "Total" or "Filtered" SUIE code must be used to attract SUIE pricing.		OCPs TCLP								Email for Invoice		anum.haider@Coffey.com	
Phone No		0426896077												Email for Results		anum.haider@Coffey.com	
Special Directions														Containers		Required Turnaround Time	
Purchase Order														Change container type & size if necessary.		Default will be 5 days if not ticked.	
Quote ID No																	
No.	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Soils (S) Water (W)												Sample Comments / Dangerous Goods Hazard Warning		
1	29_0.0	1/10/19	S														
2	30_0.0		S														
3	14P-0.42		S	X													
4	QC01		S	X													
5	QC03		S	X													
6	QC05		W	X													
7	QC06		W	X													
8	QC07		S	X													
9	QC09	1/10/19	S	X													
10																	
Total Counts																	
Method of Shipment		<input checked="" type="checkbox"/> Courier (# 94823)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Anum Haider		Signature		Afreen			
		Date		Time		Temperature											
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Temperature					
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Report No					



CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2056
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 9564 5000 EnviroSampleVic@eurofins.com

Company		Coffey Services Australia Pty Ltd		Project No		754-BNEEN234351		Project Manager		Matthew Cheney		Samplers		Anum Haider, Matthew Cheney									
Address		5/12 Creek Street Brisbane QLD 4000		Project Name		DVA-Cnr Newgate St and Headford St-Delineation of OCPs		EDD Format		ESdat		ESdat		Handed over by		_____							
Contact Name		Anum Haider		Analyses Where metals are requested, please specify "Total" or "Filtered" SUITE code must be used to attract SUITE pricing.		OCPs TCLP										Email for Invoice		anum.haider@coffey.com					
Phone No		0426896077														Email for Results		anum.haider@coffey.com					
Special Directions																Containers		Change container type & size if necessary		Required Turnaround Time		Default will be 5 days if not listed	
Purchase Order																<input type="checkbox"/> Overnight (reporting by 9am) <input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> 2 days <input type="checkbox"/> 3 days <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()							
Quote ID No																							
No	Client Sample ID	Sampled Date/Time	Matrix	Solid (S)	Water (W)												Sample Comments / Dangerous Goods Hazard Warning						
1	31-0.0	1/10/19	S																				
2	32-0.0			X																			
3	33-0.0																						
4	34-0.0			X																			
5	35-0.0																						
6	36-0.0	1/10/19	S	X																			
7	12-0.0			X																			
8	12-0.25			X																			
9	17-0.0			X																			
10	17-0.25	1/10/19	S	X																			
Total Counts																							
Method of Shipment		<input checked="" type="checkbox"/> Courier (# 94823)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Anum Haider		Signature		_____		Date		2/10/19		Time		11:58am	
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Signature		Date		Signature		Time		Temperature		Report No			
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Signature		Date		Signature		Time		Temperature		Report No			

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Sample Receipt Advice

Company name: **Coffey Environments Pty Ltd QLD**
Contact name: **Matthew Chenery**
Project name: **DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS**
Project ID: **754-BNEEN234351**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Oct 2, 2019 3:25 PM**
Eurofins reference: **680565**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 12 degrees Celsius.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Appropriate sample containers have been used.
- Sample containers for volatile analysis received with zero headspace.
- Split sample sent to requested external lab.
- Some samples have been subcontracted.

Notes ^{N/A} Custody Seals intact (if used).

Sample 15-0.25 was received broken during transit.

Contact notes

If you have any questions with respect to these samples please contact:

Ryan Gilbert on Phone : or by e.mail: RyanGilbert@eurofins.com

Results will be delivered electronically via e.mail to Matthew Chenery - matthew_chenery@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd QLD email address.

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	1-0.0	Oct 01, 2019		Soil	M19-Oc05692			X			X
2	1-0.3	Oct 01, 2019		Soil	M19-Oc05693			X			X
3	6P-0.0	Oct 01, 2019		Soil	M19-Oc05694			X			X
4	6P-0.3	Oct 01, 2019		Soil	M19-Oc05695			X			X
5	2-0.0	Oct 01, 2019		Soil	M19-Oc05696			X			X
6	2-0.3	Oct 01, 2019		Soil	M19-Oc05697			X			X
7	7P-0.0	Oct 01, 2019		Soil	M19-Oc05698			X			X
8	7P-0.25	Oct 01, 2019		Soil	M19-Oc05699			X			X
9	3-0.0	Oct 01, 2019		Soil	M19-Oc05700			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
10	3-0.35	Oct 01, 2019		Soil	M19-Oc05701			X			X
11	4-0.0	Oct 01, 2019		Soil	M19-Oc05702			X			X
12	4-0.35	Oct 01, 2019		Soil	M19-Oc05703			X			X
13	5-0.0	Oct 01, 2019		Soil	M19-Oc05704			X			X
14	5-0.35	Oct 01, 2019		Soil	M19-Oc05705			X			X
15	13P-0.0	Oct 01, 2019		Soil	M19-Oc05706			X			X
16	13P-0.2	Oct 01, 2019		Soil	M19-Oc05707			X			X
17	18-0.0	Oct 01, 2019		Soil	M19-Oc05708			X			X
18	18-0.2	Oct 01, 2019		Soil	M19-Oc05709			X			X
19	16-0.0	Oct 01, 2019		Soil	M19-Oc05710			X			X
20	16-0.45	Oct 01, 2019		Soil	M19-Oc05711			X			X
21	9P-0.0	Oct 01, 2019		Soil	M19-Oc05712			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
22	9P-0.45	Oct 01, 2019		Soil	M19-Oc05713			X			X
23	10-0.0	Oct 01, 2019		Soil	M19-Oc05714			X			X
24	10-0.45	Oct 01, 2019		Soil	M19-Oc05715			X			X
25	8-0.42	Oct 01, 2019		Soil	M19-Oc05716			X			X
26	9-0.42	Oct 01, 2019		Soil	M19-Oc05717			X			X
27	8-0.0	Oct 01, 2019		Soil	M19-Oc05718			X			X
28	9-0.0	Oct 01, 2019		Soil	M19-Oc05719			X			X
29	15-0.0	Oct 01, 2019		Soil	M19-Oc05720			X			X
30	14-0.0	Oct 01, 2019		Soil	M19-Oc05721			X			X
31	14-0.45	Oct 01, 2019		Soil	M19-Oc05722			X			X
32	14P-0.0	Oct 01, 2019		Soil	M19-Oc05723			X			X
33	11-0.0	Oct 01, 2019		Soil	M19-Oc05724			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
34	11-0.45	Oct 01, 2019		Soil	M19-Oc05725			X			X
35	6-0.0	Oct 01, 2019		Soil	M19-Oc05726			X			X
36	6-0.45	Oct 01, 2019		Soil	M19-Oc05727		X	X		X	X
37	7-0.0	Oct 01, 2019		Soil	M19-Oc05728			X			X
38	7-0.45	Oct 01, 2019		Soil	M19-Oc05729		X	X		X	X
39	14P-0.42	Oct 01, 2019		Soil	M19-Oc05730			X			X
40	QC01	Oct 01, 2019		Soil	M19-Oc05731			X			X
41	QC03	Oct 01, 2019		Soil	M19-Oc05732			X			X
42	QC05	Oct 01, 2019		Water	M19-Oc05733			X			
43	QC06	Oct 01, 2019		Water	M19-Oc05734			X			
44	QC07	Oct 01, 2019		Soil	M19-Oc05735			X			X
45	QC09	Oct 01, 2019		Soil	M19-Oc05736			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
46	32-0.0	Oct 01, 2019		Soil	M19-Oc05737			X			X
47	34-0.0	Oct 01, 2019		Soil	M19-Oc05738			X			X
48	36-0.0	Oct 01, 2019		Soil	M19-Oc05739			X			X
49	12-0.0	Oct 01, 2019		Soil	M19-Oc05740			X			X
50	12-0.25	Oct 01, 2019		Soil	M19-Oc05741			X			X
51	17-0.0	Oct 01, 2019		Soil	M19-Oc05742			X			X
52	17-0.25	Oct 01, 2019		Soil	M19-Oc05743			X			X
53	S20	Oct 01, 2019		Soil	M19-Oc05744	X					
54	S19	Oct 01, 2019		Soil	M19-Oc05745	X					
55	S21	Oct 01, 2019		Soil	M19-Oc05746	X					
56	S22	Oct 01, 2019		Soil	M19-Oc05747	X					
57	S23	Oct 01, 2019		Soil	M19-Oc05748	X					

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
58	S24	Oct 01, 2019		Soil	M19-Oc05749	X					
59	S25	Oct 01, 2019		Soil	M19-Oc05750	X					
60	S26	Oct 01, 2019		Soil	M19-Oc05751	X					
61	27-0.0	Oct 01, 2019		Soil	M19-Oc05752	X					
62	28-0.0	Oct 01, 2019		Soil	M19-Oc05753	X					
63	29-0.0	Oct 01, 2019		Soil	M19-Oc05754	X					
64	30-0.0	Oct 01, 2019		Soil	M19-Oc05755	X					
65	31-0.0	Oct 01, 2019		Soil	M19-Oc05756	X					
66	33-0.0	Oct 01, 2019		Soil	M19-Oc05757	X					
67	35-0.0	Oct 01, 2019		Soil	M19-Oc05758	X					
68	6P-0.0	Oct 01, 2019		US Leachate	M19-Oc05759			X	X		
69	7P-0.0	Oct 01, 2019		US Leachate	M19-Oc05760			X	X		

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
70	13P-0.0	Oct 01, 2019		US Leachate	M19-Oc05761			X	X		
71	9P-0.0	Oct 01, 2019		US Leachate	M19-Oc05762			X	X		
72	14P-0.0	Oct 01, 2019		US Leachate	M19-Oc05763			X	X		
Test Counts						15	2	57	5	2	50

Coffey Environments Pty Ltd QLD
47 Doggett St
Newstead
QLD 4006



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Matthew Chenery**

Report **680565-L**
Project name **DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS**
Project ID **754-BNEEN234351**
Received Date **Oct 02, 2019**

Client Sample ID			6P-0.0 US Leachate M19-Oc05759 Oct 01, 2019	7P-0.0 US Leachate M19-Oc05760 Oct 01, 2019	13P-0.0 US Leachate M19-Oc05761 Oct 01, 2019	9P-0.0 US Leachate M19-Oc05762 Oct 01, 2019
Sample Matrix	LOR	Unit				
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDD	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDE	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDT	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
a-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Aldrin	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
b-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dieldrin	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.001
Endosulfan I	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan II	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan sulphate	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin aldehyde	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin ketone	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
g-BHC (Lindane)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Heptachlor	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Heptachlor epoxide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toxaphene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.001	< 0.001	< 0.001	0.001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibutylchloroendate (surr.)	1	%	81	79	63	106
Tetrachloro-m-xylene (surr.)	1	%	68	65	53	77
USA Leaching Procedure						
Leachate Fluid ^{CO1}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	5.5	6.4	5.5	7.0
pH (Leachate fluid)	0.1	pH Units	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	4.8	4.8	5.3	5.3
pH (USA HCl addition)	0.1	pH Units	1.4	1.5	1.4	1.5

Client Sample ID			14P-0.0
Sample Matrix			US Leachate
Eurofins Sample No.			M19-Oc05763
Date Sampled			Oct 01, 2019
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Chlordanes - Total	0.005	mg/L	< 0.005
4.4'-DDD	0.001	mg/L	< 0.001
4.4'-DDE	0.001	mg/L	< 0.001
4.4'-DDT	0.001	mg/L	< 0.001
a-BHC	0.001	mg/L	< 0.001
Aldrin	0.001	mg/L	< 0.001
b-BHC	0.001	mg/L	< 0.001
d-BHC	0.001	mg/L	< 0.001
Dieldrin	0.001	mg/L	0.003
Endosulfan I	0.001	mg/L	< 0.001
Endosulfan II	0.001	mg/L	< 0.001
Endosulfan sulphate	0.001	mg/L	< 0.001
Endrin	0.001	mg/L	< 0.001
Endrin aldehyde	0.001	mg/L	< 0.001
Endrin ketone	0.001	mg/L	< 0.001
g-BHC (Lindane)	0.001	mg/L	< 0.001
Heptachlor	0.001	mg/L	< 0.001
Heptachlor epoxide	0.001	mg/L	< 0.001
Hexachlorobenzene	0.001	mg/L	< 0.001
Methoxychlor	0.001	mg/L	< 0.001
Toxaphene	0.005	mg/L	< 0.005
Aldrin and Dieldrin (Total)*	0.0001	mg/L	0.003
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.005
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.005
Dibutylchlorodate (surr.)	1	%	87
Tetrachloro-m-xylene (surr.)	1	%	65
USA Leaching Procedure			
Leachate Fluid ^{C01}		comment	1.0
pH (initial)	0.1	pH Units	6.7
pH (Leachate fluid)	0.1	pH Units	5.0
pH (off)	0.1	pH Units	5.4
pH (USA HCl addition)	0.1	pH Units	1.4

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description

Organochlorine Pesticides

Testing Site

Melbourne

Extracted

Oct 08, 2019

Holding Time

7 Days

- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	1-0.0	Oct 01, 2019		Soil	M19-Oc05692			X			X
2	1-0.3	Oct 01, 2019		Soil	M19-Oc05693			X			X
3	6P-0.0	Oct 01, 2019		Soil	M19-Oc05694			X			X
4	6P-0.3	Oct 01, 2019		Soil	M19-Oc05695			X			X
5	2-0.0	Oct 01, 2019		Soil	M19-Oc05696			X			X
6	2-0.3	Oct 01, 2019		Soil	M19-Oc05697			X			X
7	7P-0.0	Oct 01, 2019		Soil	M19-Oc05698			X			X
8	7P-0.25	Oct 01, 2019		Soil	M19-Oc05699			X			X
9	3-0.0	Oct 01, 2019		Soil	M19-Oc05700			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
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Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
10	3-0.35	Oct 01, 2019		Soil	M19-Oc05701			X			X
11	4-0.0	Oct 01, 2019		Soil	M19-Oc05702			X			X
12	4-0.35	Oct 01, 2019		Soil	M19-Oc05703			X			X
13	5-0.0	Oct 01, 2019		Soil	M19-Oc05704			X			X
14	5-0.35	Oct 01, 2019		Soil	M19-Oc05705			X			X
15	13P-0.0	Oct 01, 2019		Soil	M19-Oc05706			X			X
16	13P-0.2	Oct 01, 2019		Soil	M19-Oc05707			X			X
17	18-0.0	Oct 01, 2019		Soil	M19-Oc05708			X			X
18	18-0.2	Oct 01, 2019		Soil	M19-Oc05709			X			X
19	16-0.0	Oct 01, 2019		Soil	M19-Oc05710			X			X
20	16-0.45	Oct 01, 2019		Soil	M19-Oc05711			X			X
21	9P-0.0	Oct 01, 2019		Soil	M19-Oc05712			X			X

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Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
22	9P-0.45	Oct 01, 2019		Soil	M19-Oc05713			X			X
23	10-0.0	Oct 01, 2019		Soil	M19-Oc05714			X			X
24	10-0.45	Oct 01, 2019		Soil	M19-Oc05715			X			X
25	8-0.42	Oct 01, 2019		Soil	M19-Oc05716			X			X
26	9-0.42	Oct 01, 2019		Soil	M19-Oc05717			X			X
27	8-0.0	Oct 01, 2019		Soil	M19-Oc05718			X			X
28	9-0.0	Oct 01, 2019		Soil	M19-Oc05719			X			X
29	15-0.0	Oct 01, 2019		Soil	M19-Oc05720			X			X
30	14-0.0	Oct 01, 2019		Soil	M19-Oc05721			X			X
31	14-0.45	Oct 01, 2019		Soil	M19-Oc05722			X			X
32	14P-0.0	Oct 01, 2019		Soil	M19-Oc05723			X			X
33	11-0.0	Oct 01, 2019		Soil	M19-Oc05724			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
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Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
34	11-0.45	Oct 01, 2019		Soil	M19-Oc05725			X			X
35	6-0.0	Oct 01, 2019		Soil	M19-Oc05726			X			X
36	6-0.45	Oct 01, 2019		Soil	M19-Oc05727		X	X		X	X
37	7-0.0	Oct 01, 2019		Soil	M19-Oc05728			X			X
38	7-0.45	Oct 01, 2019		Soil	M19-Oc05729		X	X		X	X
39	14P-0.42	Oct 01, 2019		Soil	M19-Oc05730			X			X
40	QC01	Oct 01, 2019		Soil	M19-Oc05731			X			X
41	QC03	Oct 01, 2019		Soil	M19-Oc05732			X			X
42	QC05	Oct 01, 2019		Water	M19-Oc05733			X			
43	QC06	Oct 01, 2019		Water	M19-Oc05734			X			
44	QC07	Oct 01, 2019		Soil	M19-Oc05735			X			X
45	QC09	Oct 01, 2019		Soil	M19-Oc05736			X			X

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
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Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
46	32-0.0	Oct 01, 2019		Soil	M19-Oc05737			X			X
47	34-0.0	Oct 01, 2019		Soil	M19-Oc05738			X			X
48	36-0.0	Oct 01, 2019		Soil	M19-Oc05739			X			X
49	12-0.0	Oct 01, 2019		Soil	M19-Oc05740			X			X
50	12-0.25	Oct 01, 2019		Soil	M19-Oc05741			X			X
51	17-0.0	Oct 01, 2019		Soil	M19-Oc05742			X			X
52	17-0.25	Oct 01, 2019		Soil	M19-Oc05743			X			X
53	S20	Oct 01, 2019		Soil	M19-Oc05744	X					
54	S19	Oct 01, 2019		Soil	M19-Oc05745	X					
55	S21	Oct 01, 2019		Soil	M19-Oc05746	X					
56	S22	Oct 01, 2019		Soil	M19-Oc05747	X					
57	S23	Oct 01, 2019		Soil	M19-Oc05748	X					

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
58	S24	Oct 01, 2019		Soil	M19-Oc05749	X					
59	S25	Oct 01, 2019		Soil	M19-Oc05750	X					
60	S26	Oct 01, 2019		Soil	M19-Oc05751	X					
61	27-0.0	Oct 01, 2019		Soil	M19-Oc05752	X					
62	28-0.0	Oct 01, 2019		Soil	M19-Oc05753	X					
63	29-0.0	Oct 01, 2019		Soil	M19-Oc05754	X					
64	30-0.0	Oct 01, 2019		Soil	M19-Oc05755	X					
65	31-0.0	Oct 01, 2019		Soil	M19-Oc05756	X					
66	33-0.0	Oct 01, 2019		Soil	M19-Oc05757	X					
67	35-0.0	Oct 01, 2019		Soil	M19-Oc05758	X					
68	6P-0.0	Oct 01, 2019		US Leachate	M19-Oc05759			X	X		
69	7P-0.0	Oct 01, 2019		US Leachate	M19-Oc05760			X	X		

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
70	13P-0.0	Oct 01, 2019		US Leachate	M19-Oc05761			X	X		
71	9P-0.0	Oct 01, 2019		US Leachate	M19-Oc05762			X	X		
72	14P-0.0	Oct 01, 2019		US Leachate	M19-Oc05763			X	X		
Test Counts						15	2	57	5	2	50

Internal Quality Control Review and Glossary
General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Comments**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised By

Ryan Gilbert	Analytical Services Manager
Joseph Edouard	Senior Analyst-Organic (VIC)

**Glenn Jackson
General Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Coffey Environments Pty Ltd QLD
47 Doggett St
Newstead
QLD 4006



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Matthew Chenery**

Report **680565-S**
Project name **DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS**
Project ID **754-BNEEN234351**
Received Date **Oct 02, 2019**

Client Sample ID			1-0.0	1-0.3	6P-0.0	6P-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05692	M19-Oc05693	M19-Oc05694	M19-Oc05695
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	0.3	< 0.1	4.2	0.3
4.4'-DDD	0.05	mg/kg	0.13	< 0.05	0.06	< 0.05
4.4'-DDE	0.05	mg/kg	0.82	< 0.05	0.19	< 0.05
4.4'-DDT	0.05	mg/kg	0.90	< 0.05	0.33	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	1.85	< 0.05	0.58	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	2.15	< 0.1	4.78	0.3
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.3	< 0.1	4.2	0.3
Dibutylchloroendate (surr.)	1	%	81	117	124	113
Tetrachloro-m-xylene (surr.)	1	%	73	59	62	55
% Moisture	1	%	4.1	4.4	3.7	5.5

Client Sample ID			2-0.0	2-0.3	7P-0.0	7P-0.25
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05696	M19-Oc05697	M19-Oc05698	M19-Oc05699
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	5.2	0.2	2.3	0.4
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	0.05	< 0.05
4.4'-DDE	0.05	mg/kg	0.09	< 0.05	0.15	< 0.05
4.4'-DDT	0.05	mg/kg	0.33	< 0.05	0.17	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.06	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	0.09	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.06	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.42	< 0.05	0.37	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	5.68	0.2	2.76	0.4
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	5.2	0.2	2.39	0.4
Dibutylchlorendate (surr.)	1	%	126	110	119	61
Tetrachloro-m-xylene (surr.)	1	%	59	55	63	67
% Moisture						
	1	%	4.7	8.7	5.4	5.4

Client Sample ID			3-0.0	3-0.35	4-0.0	4-0.35
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05700	M19-Oc05701	M19-Oc05702	M19-Oc05703
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	1.9	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	0.27	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	0.05	< 0.05	0.31	< 0.05
4.4'-DDT	0.05	mg/kg	0.59	< 0.05	4.1	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			3-0.0	3-0.35	4-0.0	4-0.35
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05700	M19-Oc05701	M19-Oc05702	M19-Oc05703
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.91	< 0.05	4.41	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	2.81	< 0.1	4.41	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	1.9	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	79	100	83	107
Tetrachloro-m-xylene (surr.)	1	%	95	100	100	102
% Moisture	1	%	3.6	10	2.7	4.6

Client Sample ID			5-0.0	5-0.35	13P-0.0	13P-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05704	M19-Oc05705	M19-Oc05706	M19-Oc05707
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	1.5	< 0.05	0.11	< 0.05
4.4'-DDE	0.05	mg/kg	1.3	< 0.05	0.13	< 0.05
4.4'-DDT	0.05	mg/kg	5.4	< 0.05	0.08	0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	7.5	10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	0.17	0.16
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	7.5	10
DDT + DDE + DDD (Total)*	0.05	mg/kg	8.2	< 0.05	0.32	0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	8.2	< 0.1	7.82	10.05

Client Sample ID			5-0.0	5-0.35	13P-0.0	13P-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05704	M19-Oc05705	M19-Oc05706	M19-Oc05707
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	82	101	83	67
Tetrachloro-m-xylene (surr.)	1	%	95	102	109	63
% Moisture						
	1	%	4.7	7.0	5.2	7.3

Client Sample ID			18-0.0	18-0.2	16-0.0	16-0.45
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05708	M19-Oc05709	M19-Oc05710	M19-Oc05711
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	1.3	< 0.1
4.4'-DDD	0.05	mg/kg	0.35	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	2.2	0.11	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	3.8	0.07	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.61	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	0.11	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.61	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	6.35	0.18	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	6.96	0.18	1.41	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	1.41	< 0.1
Dibutylchlorendate (surr.)	1	%	71	64	93	65
Tetrachloro-m-xylene (surr.)	1	%	67	67	86	61
% Moisture						
	1	%	4.6	7.6	11	16

Client Sample ID			9P-0.0	9P-0.45	10-0.0	10-0.45
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05712	M19-Oc05713	M19-Oc05714	M19-Oc05715
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	0.10	< 0.05	0.11	0.14
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.10	0.21
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	18	0.13	28	9.3
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.16	< 0.05	0.21	0.06
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	0.13	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	18	0.13	28.1	9.51
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.1	< 0.05	0.11	0.14
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	18.26	0.13	28.42	9.71
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.16	< 0.1	0.21	< 0.1
Dibutylchloroendate (surr.)	1	%	80	62	85	79
Tetrachloro-m-xylene (surr.)	1	%	70	64	71	70
% Moisture	1	%	5.1	16	6.4	13

Client Sample ID			8-0.42	9-0.42	8-0.0	9-0.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05716	M19-Oc05717	M19-Oc05718	M19-Oc05719
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	0.10	0.20
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.56	0.08
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	1.3	0.36	23	60
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			8-0.42	9-0.42	8-0.0	9-0.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05716	M19-Oc05717	M19-Oc05718	M19-Oc05719
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	< 0.05	< 0.05	0.23	0.83
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	0.12	0.36
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.06
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	1.3	0.36	23.56	60.08
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.1	0.2
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	1.3	0.36	23.89	61.37
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.23	1.09
Dibutylchloroendate (surr.)	1	%	74	114	147	108
Tetrachloro-m-xylene (surr.)	1	%	67	55	84	92
% Moisture	1	%	7.0	10	3.9	2.8

Client Sample ID			15-0.0	14-0.0	14-0.45	14P-0.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05720	M19-Oc05721	M19-Oc05722	M19-Oc05723
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	7.4	< 0.1	< 0.1	0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.12
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.09	< 0.05	< 0.05	1.1
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	8.2	0.07	< 0.05	60
Endosulfan I	0.05	mg/kg	0.26	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.09	< 0.05	< 0.05	0.62
Endrin aldehyde	0.05	mg/kg	0.13	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	0.09	< 0.05	< 0.05	0.58
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	0.19	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	0.38	< 0.05	< 0.05	0.09
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	8.29	0.07	< 0.05	61.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.12
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	16.74	< 0.1	< 0.1	62.03

Client Sample ID			15-0.0	14-0.0	14-0.45	14P-0.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05720	M19-Oc05721	M19-Oc05722	M19-Oc05723
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	8.45	< 0.1	< 0.1	0.81
Dibutylchlorodate (surr.)	1	%	110	106	85	100
Tetrachloro-m-xylene (surr.)	1	%	67	145	87	90
% Moisture	1	%	11	3.2	26	15

Client Sample ID			11-0.0	11-0.45	6-0.0	6-0.45
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05724	M19-Oc05725	M19-Oc05726	M19-Oc05727
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	90
p-Terphenyl-d14 (surr.)	1	%	-	-	-	101
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	0.1	< 0.1	5.5	0.5
4,4'-DDD	0.05	mg/kg	0.18	0.15	0.06	< 0.05
4,4'-DDE	0.05	mg/kg	0.34	0.22	0.17	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.06	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	36	14	0.08	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.73	0.10	0.05	< 0.05

Client Sample ID			11-0.0	11-0.45	6-0.0	6-0.45
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05724	M19-Oc05725	M19-Oc05726	M19-Oc05727
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	0.07	< 0.05
Endrin ketone	0.05	mg/kg	0.31	0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	0.26	< 0.05
Heptachlor epoxide	0.05	mg/kg	0.18	< 0.05	0.89	0.26
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	36.06	14	0.08	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.52	0.37	0.23	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	37.59	14.47	7.08	0.76
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	1.01	0.1	6.77	0.76
Dibutylchloroendate (surr.)	1	%	97	92	99	105
Tetrachloro-m-xylene (surr.)	1	%	90	84	82	95
Heavy Metals						
Arsenic	2	mg/kg	-	-	-	2.1
Cadmium	0.4	mg/kg	-	-	-	< 0.4
Chromium	5	mg/kg	-	-	-	< 5
Copper	5	mg/kg	-	-	-	11
Lead	5	mg/kg	-	-	-	32
Mercury	0.1	mg/kg	-	-	-	< 0.1
Nickel	5	mg/kg	-	-	-	5.8
Zinc	5	mg/kg	-	-	-	72
% Moisture	1	%	3.2	7.1	4.3	7.9

Client Sample ID			7-0.0	7-0.45	14P-0.42	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05728	M19-Oc05729	M19-Oc05730	M19-Oc05731
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	< 0.5	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			7-0.0	7-0.45	14P-0.42	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05728	M19-Oc05729	M19-Oc05730	M19-Oc05731
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Total PAH*	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	81	-	-
p-Terphenyl-d14 (surr.)	1	%	-	92	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	16	0.4	< 0.1	2.1
4,4'-DDD	0.05	mg/kg	0.08	< 0.05	< 0.05	0.36
4,4'-DDE	0.05	mg/kg	0.26	< 0.05	< 0.05	0.11
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.06
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	3.8	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.12	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	0.24	< 0.05	< 0.05	0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	1.0	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	3.4	0.18	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	3.86	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.34	< 0.05	< 0.05	0.53
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	21.1	0.58	3.86	2.73
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	20.76	0.58	< 0.1	2.2
Dibutylchloroendate (surr.)	1	%	103	140	125	120
Tetrachloro-m-xylene (surr.)	1	%	85	83	76	78
Heavy Metals						
Arsenic	2	mg/kg	-	2.6	-	-
Cadmium	0.4	mg/kg	-	< 0.4	-	-
Chromium	5	mg/kg	-	< 5	-	-
Copper	5	mg/kg	-	12	-	-
Lead	5	mg/kg	-	19	-	-
Mercury	0.1	mg/kg	-	< 0.1	-	-
Nickel	5	mg/kg	-	5.8	-	-
Zinc	5	mg/kg	-	51	-	-
% Moisture	1	%	4.6	8.7	8.3	6.2

Client Sample ID			QC03	QC07	QC09	32-0.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05732	M19-Oc05735	M19-Oc05736	M19-Oc05737
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	0.3	< 0.1	0.1
4.4'-DDD	0.05	mg/kg	< 0.05	0.05	< 0.05	2.1
4.4'-DDE	0.05	mg/kg	< 0.05	0.24	< 0.05	1.4
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	23
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	1.9	0.06	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	74	5.0	0.30
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	1.2	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	1.2	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	0.06	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	0.22	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	75.9	5.06	0.3
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	0.29	< 0.05	26.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	77.97	5.06	26.9
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	1.78	< 0.1	0.1
Dibutylchloroendate (surr.)	1	%	103	131	105	128
Tetrachloro-m-xylene (surr.)	1	%	61	75	70	75
% Moisture	1	%	7.2	6.0	8.3	5.9

Client Sample ID			34-0.0	36-0.0	12-0.0	12-0.25
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05738	M19-Oc05739	M19-Oc05740	M19-Oc05741
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	0.15	< 0.05	0.15	< 0.05
4.4'-DDE	0.05	mg/kg	1.0	0.07	0.15	< 0.05
4.4'-DDT	0.05	mg/kg	0.51	< 0.05	0.21	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.49	< 0.05	0.81	0.11
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	17	20	3.5	0.36
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			34-0.0	36-0.0	12-0.0	12-0.25
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M19-Oc05738	M19-Oc05739	M19-Oc05740	M19-Oc05741
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	0.18	0.11	0.08	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	0.22	0.12	0.28	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	17.49	20	4.31	0.47
DDT + DDE + DDD (Total)*	0.05	mg/kg	1.66	0.07	0.51	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	19.33	20.18	4.9	0.47
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.18	0.11	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	125	106	134	131
Tetrachloro-m-xylene (surr.)	1	%	75	63	80	85
% Moisture	1	%	5.5	9.6	11	8.2

Client Sample ID			17-0.0	17-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			M19-Oc05742	M19-Oc05743
Date Sampled			Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	0.18	< 0.05
4,4'-DDT	0.05	mg/kg	0.18	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.62	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.62	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.36	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.98	< 0.1

Client Sample ID			17-0.0	17-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			M19-Oc05742	M19-Oc05743
Date Sampled			Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	106	98
Tetrachloro-m-xylene (surr.)	1	%	60	60
% Moisture	1	%	2.9	6.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Oct 05, 2019	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Oct 05, 2019	14 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Oct 05, 2019	180 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Oct 03, 2019	14 Days

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	1-0.0	Oct 01, 2019		Soil	M19-Oc05692			X			X
2	1-0.3	Oct 01, 2019		Soil	M19-Oc05693			X			X
3	6P-0.0	Oct 01, 2019		Soil	M19-Oc05694			X			X
4	6P-0.3	Oct 01, 2019		Soil	M19-Oc05695			X			X
5	2-0.0	Oct 01, 2019		Soil	M19-Oc05696			X			X
6	2-0.3	Oct 01, 2019		Soil	M19-Oc05697			X			X
7	7P-0.0	Oct 01, 2019		Soil	M19-Oc05698			X			X
8	7P-0.25	Oct 01, 2019		Soil	M19-Oc05699			X			X
9	3-0.0	Oct 01, 2019		Soil	M19-Oc05700			X			X

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Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
10	3-0.35	Oct 01, 2019		Soil	M19-Oc05701			X			X
11	4-0.0	Oct 01, 2019		Soil	M19-Oc05702			X			X
12	4-0.35	Oct 01, 2019		Soil	M19-Oc05703			X			X
13	5-0.0	Oct 01, 2019		Soil	M19-Oc05704			X			X
14	5-0.35	Oct 01, 2019		Soil	M19-Oc05705			X			X
15	13P-0.0	Oct 01, 2019		Soil	M19-Oc05706			X			X
16	13P-0.2	Oct 01, 2019		Soil	M19-Oc05707			X			X
17	18-0.0	Oct 01, 2019		Soil	M19-Oc05708			X			X
18	18-0.2	Oct 01, 2019		Soil	M19-Oc05709			X			X
19	16-0.0	Oct 01, 2019		Soil	M19-Oc05710			X			X
20	16-0.45	Oct 01, 2019		Soil	M19-Oc05711			X			X
21	9P-0.0	Oct 01, 2019		Soil	M19-Oc05712			X			X

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
22	9P-0.45	Oct 01, 2019		Soil	M19-Oc05713			X			X
23	10-0.0	Oct 01, 2019		Soil	M19-Oc05714			X			X
24	10-0.45	Oct 01, 2019		Soil	M19-Oc05715			X			X
25	8-0.42	Oct 01, 2019		Soil	M19-Oc05716			X			X
26	9-0.42	Oct 01, 2019		Soil	M19-Oc05717			X			X
27	8-0.0	Oct 01, 2019		Soil	M19-Oc05718			X			X
28	9-0.0	Oct 01, 2019		Soil	M19-Oc05719			X			X
29	15-0.0	Oct 01, 2019		Soil	M19-Oc05720			X			X
30	14-0.0	Oct 01, 2019		Soil	M19-Oc05721			X			X
31	14-0.45	Oct 01, 2019		Soil	M19-Oc05722			X			X
32	14P-0.0	Oct 01, 2019		Soil	M19-Oc05723			X			X
33	11-0.0	Oct 01, 2019		Soil	M19-Oc05724			X			X

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Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
34	11-0.45	Oct 01, 2019		Soil	M19-Oc05725			X			X
35	6-0.0	Oct 01, 2019		Soil	M19-Oc05726			X			X
36	6-0.45	Oct 01, 2019		Soil	M19-Oc05727		X	X		X	X
37	7-0.0	Oct 01, 2019		Soil	M19-Oc05728			X			X
38	7-0.45	Oct 01, 2019		Soil	M19-Oc05729		X	X		X	X
39	14P-0.42	Oct 01, 2019		Soil	M19-Oc05730			X			X
40	QC01	Oct 01, 2019		Soil	M19-Oc05731			X			X
41	QC03	Oct 01, 2019		Soil	M19-Oc05732			X			X
42	QC05	Oct 01, 2019		Water	M19-Oc05733			X			
43	QC06	Oct 01, 2019		Water	M19-Oc05734			X			
44	QC07	Oct 01, 2019		Soil	M19-Oc05735			X			X
45	QC09	Oct 01, 2019		Soil	M19-Oc05736			X			X

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
46	32-0.0	Oct 01, 2019		Soil	M19-Oc05737			X			X
47	34-0.0	Oct 01, 2019		Soil	M19-Oc05738			X			X
48	36-0.0	Oct 01, 2019		Soil	M19-Oc05739			X			X
49	12-0.0	Oct 01, 2019		Soil	M19-Oc05740			X			X
50	12-0.25	Oct 01, 2019		Soil	M19-Oc05741			X			X
51	17-0.0	Oct 01, 2019		Soil	M19-Oc05742			X			X
52	17-0.25	Oct 01, 2019		Soil	M19-Oc05743			X			X
53	S20	Oct 01, 2019		Soil	M19-Oc05744	X					
54	S19	Oct 01, 2019		Soil	M19-Oc05745	X					
55	S21	Oct 01, 2019		Soil	M19-Oc05746	X					
56	S22	Oct 01, 2019		Soil	M19-Oc05747	X					
57	S23	Oct 01, 2019		Soil	M19-Oc05748	X					

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
58	S24	Oct 01, 2019		Soil	M19-Oc05749	X					
59	S25	Oct 01, 2019		Soil	M19-Oc05750	X					
60	S26	Oct 01, 2019		Soil	M19-Oc05751	X					
61	27-0.0	Oct 01, 2019		Soil	M19-Oc05752	X					
62	28-0.0	Oct 01, 2019		Soil	M19-Oc05753	X					
63	29-0.0	Oct 01, 2019		Soil	M19-Oc05754	X					
64	30-0.0	Oct 01, 2019		Soil	M19-Oc05755	X					
65	31-0.0	Oct 01, 2019		Soil	M19-Oc05756	X					
66	33-0.0	Oct 01, 2019		Soil	M19-Oc05757	X					
67	35-0.0	Oct 01, 2019		Soil	M19-Oc05758	X					
68	6P-0.0	Oct 01, 2019		US Leachate	M19-Oc05759			X	X		
69	7P-0.0	Oct 01, 2019		US Leachate	M19-Oc05760			X	X		

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Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
70	13P-0.0	Oct 01, 2019		US Leachate	M19-Oc05761			X	X		
71	9P-0.0	Oct 01, 2019		US Leachate	M19-Oc05762			X	X		
72	14P-0.0	Oct 01, 2019		US Leachate	M19-Oc05763			X	X		
Test Counts						15	2	57	5	2	50

Internal Quality Control Review and Glossary
General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	80			70-130	Pass	
Benz(a)anthracene	%	87			70-130	Pass	
Benzo(a)pyrene	%	86			70-130	Pass	
Benzo(b&j)fluoranthene	%	77			70-130	Pass	
Benzo(g,h,i)perylene	%	87			70-130	Pass	
Benzo(k)fluoranthene	%	121			70-130	Pass	
Chrysene	%	100			70-130	Pass	
Dibenz(a,h)anthracene	%	85			70-130	Pass	
Fluoranthene	%	90			70-130	Pass	
Fluorene	%	91			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	117			70-130	Pass	
Naphthalene	%	83			70-130	Pass	
Phenanthrene	%	85			70-130	Pass	
Pyrene	%	87			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	95			70-130	Pass	
4,4'-DDD	%	122			70-130	Pass	
4,4'-DDE	%	104			70-130	Pass	
4,4'-DDT	%	72			70-130	Pass	
a-BHC	%	94			70-130	Pass	
Aldrin	%	101			70-130	Pass	
b-BHC	%	75			70-130	Pass	
d-BHC	%	87			70-130	Pass	
Dieldrin	%	96			70-130	Pass	
Endosulfan I	%	95			70-130	Pass	
Endosulfan II	%	80			70-130	Pass	
Endosulfan sulphate	%	73			70-130	Pass	
Endrin	%	79			70-130	Pass	
Endrin aldehyde	%	78			70-130	Pass	
Endrin ketone	%	90			70-130	Pass	
g-BHC (Lindane)	%	118			70-130	Pass	
Heptachlor	%	98			70-130	Pass	
Heptachlor epoxide	%	85			70-130	Pass	
Hexachlorobenzene	%	103			70-130	Pass	
Methoxychlor	%	84			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	108			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	112			80-120	Pass	
Copper	%	114			80-120	Pass	
Lead	%	120			80-120	Pass	
Mercury	%	109			75-125	Pass	
Nickel	%	109			80-120	Pass	
Zinc	%	110			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
4.4'-DDD	M19-Oc05698	CP	%	78		70-130	Pass	
4.4'-DDE	M19-Oc05698	CP	%	115		70-130	Pass	
4.4'-DDT	M19-Oc05698	CP	%	93		70-130	Pass	
a-BHC	M19-Oc05698	CP	%	82		70-130	Pass	
Aldrin	M19-Oc05698	CP	%	97		70-130	Pass	
b-BHC	M19-Oc05698	CP	%	94		70-130	Pass	
d-BHC	M19-Oc05698	CP	%	101		70-130	Pass	
Endosulfan I	M19-Oc05698	CP	%	103		70-130	Pass	
Endosulfan II	M19-Oc05698	CP	%	100		70-130	Pass	
Endosulfan sulphate	M19-Oc05698	CP	%	84		70-130	Pass	
Endrin aldehyde	M19-Oc05698	CP	%	76		70-130	Pass	
Endrin ketone	M19-Oc05698	CP	%	73		70-130	Pass	
g-BHC (Lindane)	M19-Oc05698	CP	%	73		70-130	Pass	
Heptachlor	M19-Oc05698	CP	%	77		70-130	Pass	
Heptachlor epoxide	M19-Oc05698	CP	%	115		70-130	Pass	
Hexachlorobenzene	M19-Oc05698	CP	%	95		70-130	Pass	
Methoxychlor	M19-Oc05698	CP	%	71		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M19-Oc05708	CP	%	97		70-130	Pass	
4.4'-DDD	M19-Oc05708	CP	%	110		70-130	Pass	
a-BHC	M19-Oc05708	CP	%	95		70-130	Pass	
Aldrin	M19-Oc05708	CP	%	104		70-130	Pass	
b-BHC	M19-Oc05708	CP	%	72		70-130	Pass	
d-BHC	M19-Oc05708	CP	%	76		70-130	Pass	
Dieldrin	M19-Oc05708	CP	%	75		70-130	Pass	
Endosulfan I	M19-Oc05708	CP	%	97		70-130	Pass	
Endosulfan II	M19-Oc05708	CP	%	90		70-130	Pass	
Endosulfan sulphate	M19-Oc05708	CP	%	85		70-130	Pass	
Endrin	M19-Oc05708	CP	%	78		70-130	Pass	
Endrin aldehyde	M19-Oc05708	CP	%	95		70-130	Pass	
Endrin ketone	M19-Oc05708	CP	%	118		70-130	Pass	
g-BHC (Lindane)	M19-Oc05708	CP	%	71		70-130	Pass	
Heptachlor	M19-Oc05708	CP	%	76		70-130	Pass	
Heptachlor epoxide	M19-Oc05708	CP	%	90		70-130	Pass	
Hexachlorobenzene	M19-Oc05708	CP	%	97		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M19-Oc05718	CP	%	97		70-130	Pass	
4.4'-DDD	M19-Oc05718	CP	%	120		70-130	Pass	
4.4'-DDE	M19-Oc05718	CP	%	88		70-130	Pass	
4.4'-DDT	M19-Oc05718	CP	%	76		70-130	Pass	
a-BHC	M19-Oc05718	CP	%	76		70-130	Pass	
Aldrin	M19-Oc05718	CP	%	110		70-130	Pass	
b-BHC	M19-Oc05718	CP	%	95		70-130	Pass	
d-BHC	M19-Oc05718	CP	%	99		70-130	Pass	
Endosulfan I	M19-Oc05718	CP	%	89		70-130	Pass	
Endosulfan II	M19-Oc05718	CP	%	86		70-130	Pass	
Endosulfan sulphate	M19-Oc05718	CP	%	76		70-130	Pass	
Endrin aldehyde	M19-Oc05718	CP	%	92		70-130	Pass	
Endrin ketone	M19-Oc05718	CP	%	76		70-130	Pass	
g-BHC (Lindane)	M19-Oc05718	CP	%	96		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	M19-Oc05718	CP	%	73		70-130	Pass	
Heptachlor epoxide	M19-Oc05718	CP	%	88		70-130	Pass	
Hexachlorobenzene	M19-Oc05718	CP	%	80		70-130	Pass	
Methoxychlor	M19-Oc05718	CP	%	92		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M19-Se42350	NCP	%	76		70-130	Pass	
Acenaphthylene	M19-Se42350	NCP	%	79		70-130	Pass	
Anthracene	M19-Se42350	NCP	%	73		70-130	Pass	
Benz(a)anthracene	M19-Se42350	NCP	%	79		70-130	Pass	
Benzo(a)pyrene	M19-Se42350	NCP	%	82		70-130	Pass	
Benzo(b&j)fluoranthene	M19-Se42350	NCP	%	75		70-130	Pass	
Benzo(g,h,i)perylene	M19-Se42350	NCP	%	92		70-130	Pass	
Benzo(k)fluoranthene	M19-Se42350	NCP	%	83		70-130	Pass	
Chrysene	M19-Se42350	NCP	%	78		70-130	Pass	
Dibenz(a,h)anthracene	M19-Se42350	NCP	%	110		70-130	Pass	
Fluoranthene	M19-Se42350	NCP	%	74		70-130	Pass	
Fluorene	M19-Se42350	NCP	%	78		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M19-Se42350	NCP	%	82		70-130	Pass	
Naphthalene	M19-Se42350	NCP	%	78		70-130	Pass	
Phenanthrene	M19-Se42350	NCP	%	78		70-130	Pass	
Pyrene	M19-Se42350	NCP	%	74		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M19-Oc09117	NCP	%	79		75-125	Pass	
Cadmium	M19-Oc09117	NCP	%	88		75-125	Pass	
Chromium	B19-Oc03669	NCP	%	91		75-125	Pass	
Copper	M19-Oc09117	NCP	%	132		75-125	Fail	Q08
Lead	M19-Oc08328	NCP	%	115		75-125	Pass	
Mercury	M19-Oc09117	NCP	%	112		70-130	Pass	
Nickel	M19-Oc09117	NCP	%	138		75-125	Fail	Q08
Zinc	M19-Oc09117	NCP	%	128		75-125	Fail	Q08
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
4,4'-DDE	M19-Oc05728	CP	%	81		70-130	Pass	
a-BHC	M19-Oc05728	CP	%	76		70-130	Pass	
Aldrin	M19-Oc05728	CP	%	89		70-130	Pass	
b-BHC	M19-Oc05728	CP	%	84		70-130	Pass	
d-BHC	M19-Oc05728	CP	%	73		70-130	Pass	
Dieldrin	M19-Oc05728	CP	%	86		70-130	Pass	
Endosulfan I	M19-Oc05728	CP	%	88		70-130	Pass	
Endosulfan sulphate	M19-Oc05728	CP	%	76		70-130	Pass	
Endrin ketone	M19-Oc05728	CP	%	72		70-130	Pass	
g-BHC (Lindane)	M19-Oc05728	CP	%	105		70-130	Pass	
Hexachlorobenzene	M19-Oc05728	CP	%	76		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M19-Oc05740	CP	%	111		70-130	Pass	
4,4'-DDD	M19-Oc05740	CP	%	97		70-130	Pass	
4,4'-DDE	M19-Oc05740	CP	%	101		70-130	Pass	
a-BHC	M19-Oc05740	CP	%	93		70-130	Pass	
b-BHC	M19-Oc05740	CP	%	105		70-130	Pass	
d-BHC	M19-Oc05740	CP	%	83		70-130	Pass	
Endosulfan I	M19-Oc05740	CP	%	123		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	M19-Oc05740	CP	%	115			70-130	Pass	
Endosulfan sulphate	M19-Oc05740	CP	%	99			70-130	Pass	
Endrin	M19-Oc05740	CP	%	77			70-130	Pass	
Endrin aldehyde	M19-Oc05740	CP	%	116			70-130	Pass	
Endrin ketone	M19-Oc05740	CP	%	107			70-130	Pass	
g-BHC (Lindane)	M19-Oc05740	CP	%	95			70-130	Pass	
Heptachlor	M19-Oc05740	CP	%	85			70-130	Pass	
Heptachlor epoxide	M19-Oc05740	CP	%	105			70-130	Pass	
Hexachlorobenzene	M19-Oc05740	CP	%	105			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M19-Oc05692	CP	%	4.1	4.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&i)fluoranthene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M19-Oc05697	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M19-Oc05697	CP	mg/kg	0.2	0.2	2.0	30%	Pass	
4,4'-DDD	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M19-Oc05697	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M19-Oc05702	CP	%	2.7	4.0	39	30%	Fail	Q15
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M19-Oc05707	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M19-Oc05707	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M19-Oc05707	CP	mg/kg	0.05	0.05	14	30%	Pass	
a-BHC	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M19-Oc05707	CP	mg/kg	10	8.4	22	30%	Pass	
Endosulfan I	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M19-Oc05707	CP	mg/kg	0.16	0.13	23	30%	Pass	
g-BHC (Lindane)	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M19-Oc05707	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M19-Oc05707	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M19-Oc05712	CP	%	5.1	5.4	5.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Benzo(k)fluoranthene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M19-Oc05717	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M19-Oc05717	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M19-Oc05717	CP	mg/kg	0.36	0.43	19	30%	Pass
Endosulfan I	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M19-Oc05717	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
% Moisture	M19-Oc05722	CP	%	26	23	11	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M19-Oc05727	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M19-Oc05727	CP	mg/kg	0.5	0.4	23	30%	Pass
4,4'-DDD	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M19-Oc05727	CP	mg/kg	0.26	0.23	11	30%	Pass
Hexachlorobenzene	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M19-Oc05727	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	B19-Oc03698	NCP	mg/kg	14	14	<1	30%	Pass
Cadmium	B19-Oc03698	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	B19-Oc03698	NCP	mg/kg	15	16	1.0	30%	Pass
Copper	B19-Oc03698	NCP	mg/kg	35	35	1.0	30%	Pass
Lead	M19-Oc04232	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	B19-Oc03698	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	B19-Oc03698	NCP	mg/kg	24	24	1.0	30%	Pass
Zinc	B19-Oc03698	NCP	mg/kg	90	92	1.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M19-Oc05732	CP	%	7.2	6.8	5.0	30%	Pass

Comments
Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Ryan Gilbert	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)


Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Coffey Environments Pty Ltd QLD
47 Doggett St
Newstead
QLD 4006



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Matthew Chenery**

Report **680565-W**
 Project name **DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS**
 Project ID **754-BNEEN234351**
 Received Date **Oct 02, 2019**

Client Sample ID			QC05	QC06
Sample Matrix			Water	Water
Eurofins Sample No.			M19-Oc05733	M19-Oc05734
Date Sampled			Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001
Dibutylchloroendate (surr.)	1	%	122	115
Tetrachloro-m-xylene (surr.)	1	%	56	83

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description

Organochlorine Pesticides

Testing Site

Melbourne

Extracted

Oct 08, 2019

Holding Time

7 Days

- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 2, 2019 3:25 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	680565	Due:	Oct 9, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	1-0.0	Oct 01, 2019		Soil	M19-Oc05692			X			X
2	1-0.3	Oct 01, 2019		Soil	M19-Oc05693			X			X
3	6P-0.0	Oct 01, 2019		Soil	M19-Oc05694			X			X
4	6P-0.3	Oct 01, 2019		Soil	M19-Oc05695			X			X
5	2-0.0	Oct 01, 2019		Soil	M19-Oc05696			X			X
6	2-0.3	Oct 01, 2019		Soil	M19-Oc05697			X			X
7	7P-0.0	Oct 01, 2019		Soil	M19-Oc05698			X			X
8	7P-0.25	Oct 01, 2019		Soil	M19-Oc05699			X			X
9	3-0.0	Oct 01, 2019		Soil	M19-Oc05700			X			X

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
10	3-0.35	Oct 01, 2019		Soil	M19-Oc05701			X			X
11	4-0.0	Oct 01, 2019		Soil	M19-Oc05702			X			X
12	4-0.35	Oct 01, 2019		Soil	M19-Oc05703			X			X
13	5-0.0	Oct 01, 2019		Soil	M19-Oc05704			X			X
14	5-0.35	Oct 01, 2019		Soil	M19-Oc05705			X			X
15	13P-0.0	Oct 01, 2019		Soil	M19-Oc05706			X			X
16	13P-0.2	Oct 01, 2019		Soil	M19-Oc05707			X			X
17	18-0.0	Oct 01, 2019		Soil	M19-Oc05708			X			X
18	18-0.2	Oct 01, 2019		Soil	M19-Oc05709			X			X
19	16-0.0	Oct 01, 2019		Soil	M19-Oc05710			X			X
20	16-0.45	Oct 01, 2019		Soil	M19-Oc05711			X			X
21	9P-0.0	Oct 01, 2019		Soil	M19-Oc05712			X			X

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
22	9P-0.45	Oct 01, 2019		Soil	M19-Oc05713			X			X
23	10-0.0	Oct 01, 2019		Soil	M19-Oc05714			X			X
24	10-0.45	Oct 01, 2019		Soil	M19-Oc05715			X			X
25	8-0.42	Oct 01, 2019		Soil	M19-Oc05716			X			X
26	9-0.42	Oct 01, 2019		Soil	M19-Oc05717			X			X
27	8-0.0	Oct 01, 2019		Soil	M19-Oc05718			X			X
28	9-0.0	Oct 01, 2019		Soil	M19-Oc05719			X			X
29	15-0.0	Oct 01, 2019		Soil	M19-Oc05720			X			X
30	14-0.0	Oct 01, 2019		Soil	M19-Oc05721			X			X
31	14-0.45	Oct 01, 2019		Soil	M19-Oc05722			X			X
32	14P-0.0	Oct 01, 2019		Soil	M19-Oc05723			X			X
33	11-0.0	Oct 01, 2019		Soil	M19-Oc05724			X			X

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
34	11-0.45	Oct 01, 2019		Soil	M19-Oc05725			X			X
35	6-0.0	Oct 01, 2019		Soil	M19-Oc05726			X			X
36	6-0.45	Oct 01, 2019		Soil	M19-Oc05727		X	X		X	X
37	7-0.0	Oct 01, 2019		Soil	M19-Oc05728			X			X
38	7-0.45	Oct 01, 2019		Soil	M19-Oc05729		X	X		X	X
39	14P-0.42	Oct 01, 2019		Soil	M19-Oc05730			X			X
40	QC01	Oct 01, 2019		Soil	M19-Oc05731			X			X
41	QC03	Oct 01, 2019		Soil	M19-Oc05732			X			X
42	QC05	Oct 01, 2019		Water	M19-Oc05733			X			
43	QC06	Oct 01, 2019		Water	M19-Oc05734			X			
44	QC07	Oct 01, 2019		Soil	M19-Oc05735			X			X
45	QC09	Oct 01, 2019		Soil	M19-Oc05736			X			X

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Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
46	32-0.0	Oct 01, 2019		Soil	M19-Oc05737			X			X
47	34-0.0	Oct 01, 2019		Soil	M19-Oc05738			X			X
48	36-0.0	Oct 01, 2019		Soil	M19-Oc05739			X			X
49	12-0.0	Oct 01, 2019		Soil	M19-Oc05740			X			X
50	12-0.25	Oct 01, 2019		Soil	M19-Oc05741			X			X
51	17-0.0	Oct 01, 2019		Soil	M19-Oc05742			X			X
52	17-0.25	Oct 01, 2019		Soil	M19-Oc05743			X			X
53	S20	Oct 01, 2019		Soil	M19-Oc05744	X					
54	S19	Oct 01, 2019		Soil	M19-Oc05745	X					
55	S21	Oct 01, 2019		Soil	M19-Oc05746	X					
56	S22	Oct 01, 2019		Soil	M19-Oc05747	X					
57	S23	Oct 01, 2019		Soil	M19-Oc05748	X					

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Project ID:	754-BNEEN234351	Fax:		Contact Name:	Matthew Chenery

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
58	S24	Oct 01, 2019		Soil	M19-Oc05749	X					
59	S25	Oct 01, 2019		Soil	M19-Oc05750	X					
60	S26	Oct 01, 2019		Soil	M19-Oc05751	X					
61	27-0.0	Oct 01, 2019		Soil	M19-Oc05752	X					
62	28-0.0	Oct 01, 2019		Soil	M19-Oc05753	X					
63	29-0.0	Oct 01, 2019		Soil	M19-Oc05754	X					
64	30-0.0	Oct 01, 2019		Soil	M19-Oc05755	X					
65	31-0.0	Oct 01, 2019		Soil	M19-Oc05756	X					
66	33-0.0	Oct 01, 2019		Soil	M19-Oc05757	X					
67	35-0.0	Oct 01, 2019		Soil	M19-Oc05758	X					
68	6P-0.0	Oct 01, 2019		US Leachate	M19-Oc05759			X	X		
69	7P-0.0	Oct 01, 2019		US Leachate	M19-Oc05760			X	X		

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Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						HOLD	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	USA Leaching Procedure	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217											
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
70	13P-0.0	Oct 01, 2019		US Leachate	M19-Oc05761			X	X		
71	9P-0.0	Oct 01, 2019		US Leachate	M19-Oc05762			X	X		
72	14P-0.0	Oct 01, 2019		US Leachate	M19-Oc05763			X	X		
Test Counts						15	2	57	5	2	50

Internal Quality Control Review and Glossary
General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
4.4'-DDD	%	127			70-130	Pass	
4.4'-DDE	%	117			70-130	Pass	
4.4'-DDT	%	92			70-130	Pass	
a-BHC	%	128			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-BHC	%	87			70-130	Pass	
d-BHC	%	128			70-130	Pass	
Dieldrin	%	112			70-130	Pass	
Endosulfan I	%	116			70-130	Pass	
Endosulfan II	%	119			70-130	Pass	
Endosulfan sulphate	%	125			70-130	Pass	
Endrin	%	103			70-130	Pass	
Endrin aldehyde	%	122			70-130	Pass	
Endrin ketone	%	90			70-130	Pass	
g-BHC (Lindane)	%	88			70-130	Pass	
Heptachlor	%	114			70-130	Pass	
Heptachlor epoxide	%	128			70-130	Pass	
Hexachlorobenzene	%	126			70-130	Pass	
Methoxychlor	%	91			70-130	Pass	

Comments**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Ryan Gilbert	Analytical Services Manager
Joseph Edouard	Senior Analyst-Organic (VIC)

**Glenn Jackson
General Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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Enviro Sample Vic

From: Ryan Gilbert
Sent: Thursday, 10 October 2019 1:37 PM
To: Enviro Sample Vic
Subject: FW: Eurofins Test Results, Invoice - Report 680565 : Site DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS (754-BNEEN234351)

Hi All,

Please process the below.

Ryan Gilbert

61 499 404 007

Email : RyanGilbert@Eurofins.com

Website : www.eurofins.com.au/environmental-testing

From: Haider, Anum [<mailto:Anum.Haider@coffey.com>]

Sent: Thursday, 10 October 2019 12:19 PM

To: Ryan Gilbert

Cc: Chenery, Matthew

Subject: RE: Eurofins Test Results, Invoice - Report 680565 : Site DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS (754-BNEEN234351)

EXTERNAL EMAIL*

Hi Ryan

Can we run additional leaching OCPs analysis via TCLP on following seven samples:

- 8-0.0 Oc05718 - 998
- 9-0.0 Oc05719 - ↓
- 10-0.0 Oc05714 - 998
- 11-0.0 Oc05724 - 999
- 15-0.0 Oc05720 - ↓
- 34-0.0 Oc05738 - 999
- 36-0.0 Oc05739 - ↓

Cathie
EF
10/10 12.19 PM

Thanks
Anum

Anum Haider
Environmental Scientist

Level 5
12 Creek Street
Brisbane QLD 4000

t: +61 7 3239 9337
m: +61 426 896 077

681740

Melbourne

6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney

Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane

1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth

2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521

e.mail : EnviroSales@eurofins.com

web : www.eurofins.com.au

Sample Receipt Advice

Company name: **Coffey Environments Pty Ltd QLD**
Contact name: Anum Haider
Project name: DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS
Project ID: 754-BNEEN234351
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Oct 10, 2019 12:19 PM
Eurofins reference: **681740**

Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Appropriate sample containers have been used.
- Split sample sent to requested external lab.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Ryan Gilbert on Phone : or by e.mail: RyanGilbert@eurofins.com

Results will be delivered electronically via e.mail to Anum Haider - Anum.Haider@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd QLD email address.

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 10, 2019 12:19 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	681740	Due:	Oct 17, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Anum Haider

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						Organochlorine Pesticides	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	8-0.0	Oct 01, 2019		US Leachate	M19-Oc14982	X	X
2	9-0.0	Oct 01, 2019		US Leachate	M19-Oc14983	X	X
3	10-0.0	Oct 01, 2019		US Leachate	M19-Oc14984	X	X
4	11-0.0	Oct 01, 2019		US Leachate	M19-Oc14985	X	X
5	15-0.0	Oct 01, 2019		US Leachate	M19-Oc14986	X	X
6	34-0.0	Oct 01, 2019		US Leachate	M19-Oc14987	X	X
7	36-0.0	Oct 01, 2019		US Leachate	M19-Oc14988	X	X
Test Counts						7	7

Coffey Environments Pty Ltd QLD
47 Doggett St
Newstead
QLD 4006



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: **Anum Haider**

Report **681740-L**
 Project name **DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS**
 Project ID **754-BNEEN234351**
 Received Date **Oct 10, 2019**

Client Sample ID			8-0.0	9-0.0	10-0.0	11-0.0
Sample Matrix			US Leachate	US Leachate	US Leachate	US Leachate
Eurofins Sample No.			M19-Oc14982	M19-Oc14983	M19-Oc14984	M19-Oc14985
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDD	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDE	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDT	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
a-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Aldrin	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
b-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dieldrin	0.001	mg/L	0.002	0.010	0.004	0.020
Endosulfan I	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan II	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan sulphate	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin aldehyde	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin ketone	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
g-BHC (Lindane)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Heptachlor	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Heptachlor epoxide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toxaphene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0001	mg/L	0.002	0.01	0.004	0.02
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.005	0.01	< 0.005	0.02
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibutylchloroendate (surr.)	1	%	81	76	100	86
Tetrachloro-m-xylene (surr.)	1	%	80	87	124	98
USA Leaching Procedure						
Leachate Fluid ^{CO1}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	6.7	6.4	6.6	6.0
pH (Leachate fluid)	0.1	pH Units	4.9	4.9	4.9	4.9
pH (off)	0.1	pH Units	5.2	4.9	5.0	5.0
pH (USA HCl addition)	0.1	pH Units	1.2	1.3	1.2	1.3

Client Sample ID			15-0.0	34-0.0	36-0.0
Sample Matrix			US Leachate	US Leachate	US Leachate
Eurofins Sample No.			M19-Oc14986	M19-Oc14987	M19-Oc14988
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Chlordanes - Total	0.005	mg/L	< 0.005	< 0.005	< 0.005
4.4'-DDD	0.001	mg/L	< 0.001	< 0.001	< 0.001
4.4'-DDE	0.001	mg/L	< 0.001	< 0.001	< 0.001
4.4'-DDT	0.001	mg/L	< 0.001	< 0.001	< 0.001
a-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aldrin	0.001	mg/L	< 0.001	< 0.001	< 0.001
b-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001
d-BHC	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dieldrin	0.001	mg/L	0.002	0.012	0.004
Endosulfan I	0.001	mg/L	< 0.001	< 0.001	< 0.001
Endosulfan II	0.001	mg/L	< 0.001	< 0.001	< 0.001
Endosulfan sulphate	0.001	mg/L	< 0.001	< 0.001	< 0.001
Endrin	0.001	mg/L	< 0.001	< 0.001	< 0.001
Endrin aldehyde	0.001	mg/L	< 0.001	< 0.001	< 0.001
Endrin ketone	0.001	mg/L	< 0.001	< 0.001	< 0.001
g-BHC (Lindane)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Heptachlor	0.001	mg/L	< 0.001	< 0.001	< 0.001
Heptachlor epoxide	0.001	mg/L	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Methoxychlor	0.001	mg/L	< 0.001	< 0.001	< 0.001
Toxaphene	0.005	mg/L	< 0.005	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0001	mg/L	0.002	0.012	0.004
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.005	0.012	< 0.005
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.005	< 0.005	< 0.005
Dibutylchloroendate (surr.)	1	%	65	146	132
Tetrachloro-m-xylene (surr.)	1	%	71	78	121
USA Leaching Procedure					
Leachate Fluid ^{C01}		comment	1.0	1.0	1.0
pH (initial)	0.1	pH Units	6.9	7.1	6.8
pH (Leachate fluid)	0.1	pH Units	4.9	4.9	4.9
pH (off)	0.1	pH Units	4.9	5.1	5.1
pH (USA HCl addition)	0.1	pH Units	1.2	1.3	1.4

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description

Organochlorine Pesticides

Testing Site

Melbourne

Extracted

Oct 11, 2019

Holding Time

7 Days

- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)

Company Name:	Coffey Environments Pty Ltd QLD	Order No.:		Received:	Oct 10, 2019 12:19 PM
Address:	47 Doggett St Newstead QLD 4006	Report #:	681740	Due:	Oct 17, 2019
Project Name:	DVA-CNR NEWGATE ST AND HEADFORD ST - DELINEATION OF OCPS	Phone:	07 3503 7192	Priority:	5 Day
Project ID:	754-BNEEN234351	Fax:		Contact Name:	Anum Haider

Eurofins Analytical Services Manager : Ryan Gilbert

Sample Detail						Organochlorine Pesticides	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	8-0.0	Oct 01, 2019		US Leachate	M19-Oc14982	X	X
2	9-0.0	Oct 01, 2019		US Leachate	M19-Oc14983	X	X
3	10-0.0	Oct 01, 2019		US Leachate	M19-Oc14984	X	X
4	11-0.0	Oct 01, 2019		US Leachate	M19-Oc14985	X	X
5	15-0.0	Oct 01, 2019		US Leachate	M19-Oc14986	X	X
6	34-0.0	Oct 01, 2019		US Leachate	M19-Oc14987	X	X
7	36-0.0	Oct 01, 2019		US Leachate	M19-Oc14988	X	X
Test Counts						7	7

Internal Quality Control Review and Glossary
General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
- Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
- Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
- For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Comments
Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised By

Ryan Gilbert	Analytical Services Manager
Joseph Edouard	Senior Analyst-Organic (VIC)


**Glenn Jackson
General Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EB1926161**

Client	: COFFEY ENVIRONMENTS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: MATTHEW CHENERY	Contact	: Andrew Epps
Address	: Level 5 12 Creek St Brisbane QLD, AUSTRALIA 4000	Address	: 2 Byth Street Stafford QLD Australia 4053
E-mail	: matthew.chenery@coffey.com	E-mail	: andrew.epps@alsglobal.com
Telephone	: ----	Telephone	: +61 7 3552 8639
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: 754-BNEEN234351	Page	: 1 of 2
Order number	: ----	Quote number	: ES2018COFENV0007 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Newdegate St & Headford St-Delineation OCP's		
Sampler	: ANUM HAIDER, MATTHEW CHENERY		

Dates

Date Samples Received	: 02-Oct-2019 13:20	Issue Date	: 02-Oct-2019
Client Requested Due Date	: 11-Oct-2019	Scheduled Reporting Date	: 11-Oct-2019

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 3.4°C - Ice present
Receipt Detail	: SMALL ESKY	No. of samples received / analysed	: 4 / 4

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please be advised; where OCP analysis has been requested, OC pesticide analysis has been assigned. If this is incorrect, please contact client services at ALSEnviro.Brisbane@alsglobal.com.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP068A (solids) Organochlorine Pesticides by GCMS
EB1926161-001	01-Oct-2019 00:00	QC02	✓	✓
EB1926161-002	01-Oct-2019 00:00	QC04	✓	✓
EB1926161-003	01-Oct-2019 00:00	QC08	✓	✓
EB1926161-004	01-Oct-2019 00:00	QC10	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ANUM HAIDER

- *AU Certificate of Analysis - NATA (COA)	Email	anum.haider@coffey.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	anum.haider@coffey.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	anum.haider@coffey.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	anum.haider@coffey.com
- A4 - AU Tax Invoice (INV)	Email	anum.haider@coffey.com
- Chain of Custody (CoC) (COC)	Email	anum.haider@coffey.com
- EDI Format - ENMRG (ENMRG)	Email	anum.haider@coffey.com
- EDI Format - ESDAT (ESDAT)	Email	anum.haider@coffey.com

MATTHEW CHENERY

- *AU Certificate of Analysis - NATA (COA)	Email	matthew.chenery@coffey.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	matthew.chenery@coffey.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	matthew.chenery@coffey.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	matthew.chenery@coffey.com
- A4 - AU Tax Invoice (INV)	Email	matthew.chenery@coffey.com
- Chain of Custody (CoC) (COC)	Email	matthew.chenery@coffey.com
- EDI Format - ENMRG (ENMRG)	Email	matthew.chenery@coffey.com
- EDI Format - ESDAT (ESDAT)	Email	matthew.chenery@coffey.com

MICHELLE MORRISON

- A4 - AU Tax Invoice (INV)	Email	michelle_morrison@coffey.com
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CERTIFICATE OF ANALYSIS

Work Order : **EB1926161**
Client : **COFFEY ENVIRONMENTS PTY LTD**
Contact : MATTHEW CHENERY
Address : Level 5 12 Creek St
 Brisbane QLD, AUSTRALIA 4000

Telephone : ----
Project : 754-BNEEN234351
Order number : ----
C-O-C number : ----
Sampler : ANUM HAIDER, MATTHEW CHENERY
Site : Newdegate St & Headford St-Delineation OCP's
Quote number : EN/222
No. of samples received : 4
No. of samples analysed : 4

Page : 1 of 4
Laboratory : Environmental Division Brisbane
Contact : Andrew Epps
Address : 2 Byth Street Stafford QLD Australia 4053

Telephone : +61 7 3552 8639
Date Samples Received : 02-Oct-2019 13:20
Date Analysis Commenced : 03-Oct-2019
Issue Date : 10-Oct-2019 16:40



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Matt Frost	Assistant Laboratory Manager	Brisbane Inorganics, Stafford, QLD
Matt Frost	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP068: The LOR for 'QC02' has been raised due to matrix interference.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Client sample ID			QC02	QC04	QC08	QC10	----	
Client sampling date / time		01-Oct-2019 00:00			01-Oct-2019 00:00		01-Oct-2019 00:00		01-Oct-2019 00:00	----
Compound	CAS Number	LOR	Unit	EB1926161-001	EB1926161-002	EB1926161-003	EB1926161-004	-----	----	
				Result	Result	Result	Result	----		
EA055: Moisture Content (Dried @ 105-110°C)										
Moisture Content	----	0.1	%	3.4	4.3	3.1	7.2	----	----	
EP068A: Organochlorine Pesticides (OC)										
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.16	<0.05	----	----	
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	2.32	<0.05	----	----	
Heptachlor epoxide	1024-57-3	0.05	mg/kg	0.06	<0.05	0.22	<0.05	----	----	
^ Total Chlordane (sum)	----	0.05	mg/kg	5.84	0.23	0.37	<0.05	----	----	
trans-Chlordane	5103-74-2	0.05	mg/kg	2.71	0.11	0.32	<0.05	----	----	
alpha-Endosulfan	959-98-8	0.05	mg/kg	<1.02	<0.05	<0.05	<0.05	----	----	
cis-Chlordane	5103-71-9	0.05	mg/kg	3.13	0.12	0.05	<0.05	----	----	
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	107	3.08	----	----	
4,4'-DDE	72-55-9	0.05	mg/kg	0.14	<0.05	<0.05	<0.05	----	----	
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	1.47	<0.05	----	----	
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----	----	
4,4'-DDT	50-29-3	0.2	mg/kg	0.9	<0.2	<0.2	<0.2	----	----	
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	1.40	<0.05	----	----	
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----	----	
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	109	3.08	----	----	
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	1.04	<0.05	<0.05	<0.05	----	----	
EP068S: Organochlorine Pesticide Surrogate										
Dibromo-DDE	21655-73-2	0.05	%	138	129	137	131	----	----	
EP068T: Organophosphorus Pesticide Surrogate										
DEF	78-48-8	0.05	%	119	106	105	117	----	----	



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	138
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	23	134

QUALITY CONTROL REPORT

Work Order	: EB1926161	Page	: 1 of 5
Client	: COFFEY ENVIRONMENTS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: MATTHEW CHENERY	Contact	: Andrew Epps
Address	: Level 5 12 Creek St Brisbane QLD, AUSTRALIA 4000	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61 7 3552 8639
Project	: 754-BNEEN234351	Date Samples Received	: 02-Oct-2019
Order number	: ----	Date Analysis Commenced	: 03-Oct-2019
C-O-C number	: ----	Issue Date	: 10-Oct-2019
Sampler	: ANUM HAIDER, MATTHEW CHENERY		
Site	: Newdegate St & Headford St-Delineation OCP's		
Quote number	: EN/222		
No. of samples received	: 4		
No. of samples analysed	: 4		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Matt Frost	Assistant Laboratory Manager	Brisbane Inorganics, Stafford, QLD
Matt Frost	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2619974)									
EB1925370-010	Anonymous	EA055: Moisture Content	----	0.1	%	19.4	19.2	1.24	0% - 50%
EB1926164-002	Anonymous	EA055: Moisture Content	----	0.1	%	28.1	28.4	1.03	0% - 20%
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2619970)									
EB1925370-010	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Page : 3 of 5
 Work Order : EB1926161
 Client : COFFEY ENVIRONMENTS PTY LTD
 Project : 754-BNEEN234351



Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2619970) - continued									
EB1925370-010	Anonymous	EP068: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike	Spike Recovery (%)		
					Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 2619970)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	54.0	121
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	103	80.1	134
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.5	49.0	121
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	75.5	136
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	61.0	122
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	113	65.0	130
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	70.0	130
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	104	58.0	118
EP068: Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	56.0	119
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	51.0	125
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	57.0	118
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	67.0	129
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	121
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	60.0	137
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	61.0	122
EP068: Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	107	60.0	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	52.0	125
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	55.0	125
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	115	80.0	142
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	55.0	129
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	96.6	53.0	136
EP068: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	<0.05	----	----	----	----
EP068: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike	Spike Recovery(%)	Recovery Limits (%)
				Concentration	MS	Low



Sub-Matrix: **SOIL**

				<i>Matrix Spike (MS) Report</i>			
				<i>Spike</i>	<i>SpikeRecovery(%)</i>	<i>Recovery Limits (%)</i>	
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
EP068A: Organochlorine Pesticides (OC) (QCLot: 2619970)							
EB1925370-013	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	103	75.5	136
		EP068: Heptachlor	76-44-8	0.5 mg/kg	116	65.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	107	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	103	67.0	129
		EP068: Endrin	72-20-8	0.5 mg/kg	102	60.0	137
		EP068: 4.4'-DDT	50-29-3	0.5 mg/kg	124	80.0	142



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EB1926161	Page	: 1 of 4
Client	: COFFEY ENVIRONMENTS PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: MATTHEW CHENERY	Telephone	: +61 7 3552 8639
Project	: 754-BNEEN234351	Date Samples Received	: 02-Oct-2019
Site	: Newdegate St & Headford St-Delineation OCP's	Issue Date	: 10-Oct-2019
Sampler	: ANUM HAIDER, MATTHEW CHENERY	No. of samples received	: 4
Order number	: ----	No. of samples analysed	: 4

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

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



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
QC02, QC08,	QC04, QC10	01-Oct-2019	----	----	----	03-Oct-2019	15-Oct-2019	✓
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
QC02, QC08,	QC04, QC10	01-Oct-2019	08-Oct-2019	15-Oct-2019	✓	08-Oct-2019	17-Nov-2019	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	11	18.18	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	16.67	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Pesticides by GCMS	EP068	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Pesticides by GCMS	EP068	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Pesticides by GCMS	EP068	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard



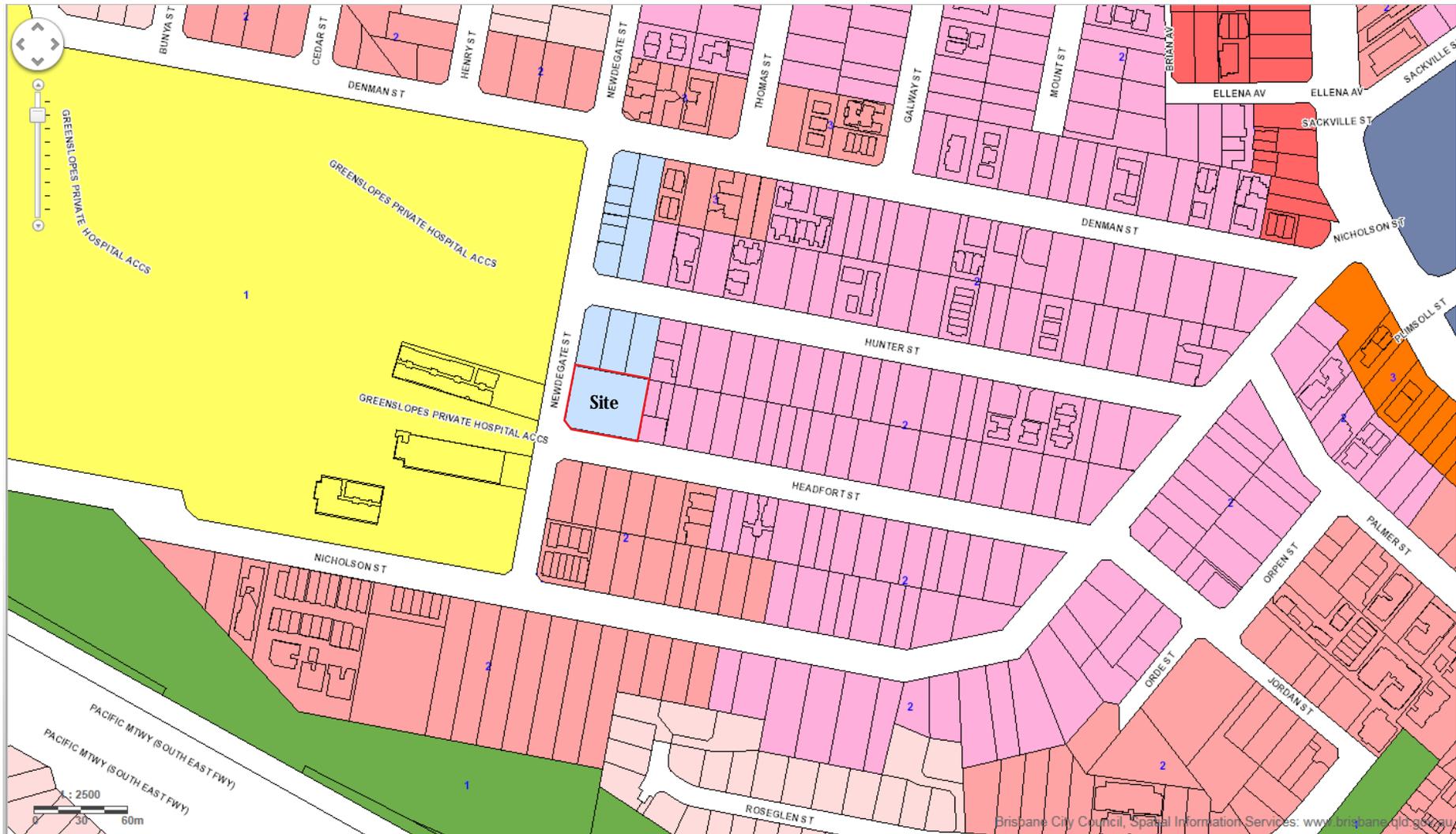
Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

<i>Analytical Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)

<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

Appendix E – Site and Surrounding Land Use Zones



CF Community Facilities (Major Health Care, Emergency, Education, Major Sports Community Purposes, Cemetery)

NC Neighbourhood Centre

CR Character Residential (Character, infill housing)

LMR Low to Medium Density Residential

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