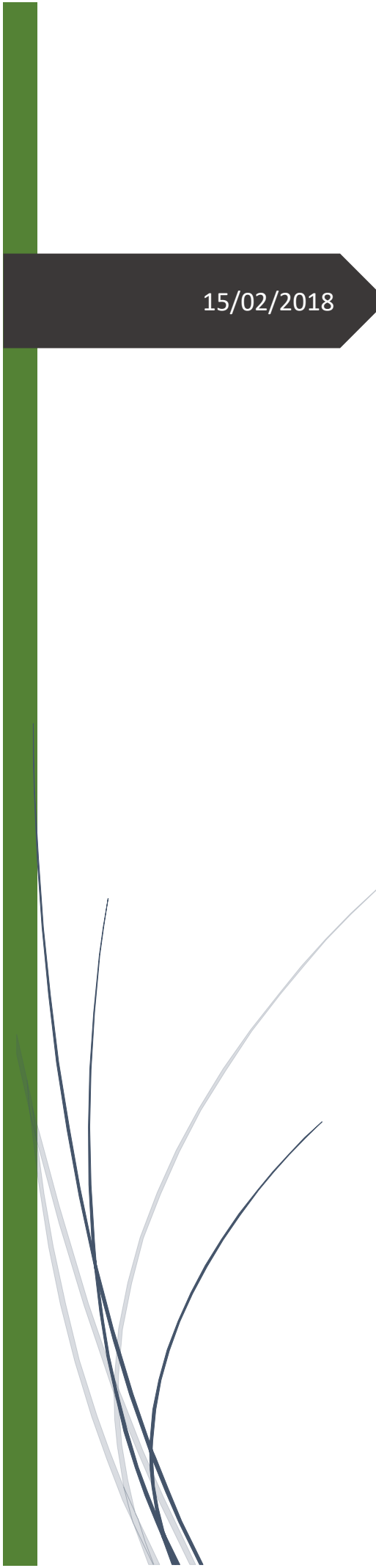




15/02/2018

Lot 217 Grange Avenue, Marsden Park

SOIL REPORT-Report No: JDTMG18S-0420

To:
Essar Group Pty Ltd.
10/4 Gladstone Road,
Castle Hill, NSW-2153.

DTM GEOCIVIL CONSULTING PTY LTD



SOIL CONTAMINATION TESTING	
To: Mr. Harish Rajagopal	Date: 16/02/2018
Job Ref.: JDTMG18S-0420	Project Location: Lot 217 Grange Avenue, Marsden Park

Introduction:

DTM GEOCIVIL Consulting Pty Ltd was requested to undertake a site contamination assessment to identify the environmental suitability of the site in relation to future development. The investigation is carried requirements of EPA and council requirements.



Fig.1- Proposed Test Location

Field Work:

The field work was conducted on 15th February 2018 to investigate the subject block and undertake soil sampling in accordance with NSW EPA guidelines.



Geology:

From the Geological Map Series 1:100,000-Penrith Map, Geological Map of Sydney the subject site is located on Quaternary fine-grained sand, silt and clay. The study area is located on the Wianamatta group of shales, consisting of the Liverpool subgroup. This subgroup consists of a lower formation of Ashfield Shale which grades upwards into a fine sandstone siltstone laminate, culminating in the overlying Minchinbury Sandstone.

Site Observation and Background:

The subject site was occupied by a single storey dwelling with a total area of the block being 1.112 hectares. The subject has high exposure to wind and sun. The property is located south side of Grange avenue. The property was virtually flat, except a mild slope towards the rear end of the site. The slope was falling towards south east side. Couple of dams were observed behind the site. Mature and immature trees were observed around the perimeter and scattered inside the block. The ground was covered with dense layer of grass at the time of testing. The vacant portion of the block was not utilized for any vegetation or farming purpose.



Fig.2- Onsite waste management system



The site has fair surface and poor sub-surface drainage respectively. The land was observed to be dry at the surface till a depth of approximate 300mm before becoming slightly moist. Based on boreholes the soil samples revealed very dry, firm brownish fine grained clayey silt overlying very stiff slightly moist reddish silty clay. No fill was found on site. The whole block comprised natural soil consistent with the land geology. Onsite waste management system was in use at time of testing. No ground water was encountered in the boreholes.

Soil Sampling:

Contamination sampling was undertaken in accordance to NSW EPA and Council guidelines. The total area of the block was 1.112 hectares. Systematic and targeted soil boring and sampling was undertaken. A total of twenty-three (23) sampling points was required and undertaken in accordance to NSW EPA Sample Design Guidelines. The boreholes were spread across the block evenly (refer site plan below). From the drilled twenty-three (23) boreholes, a total of forty-seven (47) samples were collected with two (2) samples from each borehole. Samples were collected at various depths from the boreholes.

The recovered soil samples were tested for analytes, including heavy metals, Total Petroleum Hydrocarbons (TPHs), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAH), Organochlorine Pesticides (OCP), Polychlorinated Biphenyls (BCP) and Asbestos.

Twenty-three (23) samples were selected covering all areas of the subject site and analyzed for contamination in a NATA accredited lab. All test results, certificate of analysis, chain of custody and summary of the results are provided in the appendix below.

Results:

The soil samples recovered from the boreholes were consistent with the geology of the site. No fill was encountered from any of the boreholes. The land profile revealed no low spots for water stagnation during precipitation times. The overall site had fair surface runoff. The block has high exposure to wind and sun providing good evaporation and water transition. On site waste management system was used with suitable plants for irrigation purpose.



The soil samples comprised two horizons, Horizon A and Horizon B. Surface to approximately 300mm depth is Horizon A and underlying reddish very stiff to hard silty clay is characterized as Horizon B. No discoloration, odour and spills was noted from any of the samples or from the site. Only the waste management system located away from the dwelling towards the rear of the block, is only underground system. It did not show any overflow or any other abnormality around the constructed system.

Two samples were taken from each borehole totaling forty-seven samples (47), out of which twenty-three samples equally from Horizon A and Horizon B were analyzed.

Overall analyzed test results received from NATA accredited lab and with comparison to threshold limits from NSW EPA & DPI and Council guidelines – NO Contamination or Asbestos was found from the tested twenty-three samples. Based on these above site findings, assessment, and test results analysis we can conclude the subject site is free from contamination.

The above findings and reports are based on the borehole samples, site findings and lab test results at the time and location of testing and are expected to be typical of the area being considered. This report is based only on the information provided at the time of this report preparation and may not be valid if changes are made to the site. This report shall be read in conjunction NSW EPA guidelines and relevant documents and must be reproduced only in full.

Should you have any queries regarding the above, please do not hesitate to contact us.

Yours sincerely,

For DTM GEOCIVIL Consulting Pty. Ltd.

Divakar Radhakrishnan

BEng MEng(Hons)

Geotechnical Engineer



SITE PLAN - Fig: 3

Note: Site Plan and Test locations are approximate

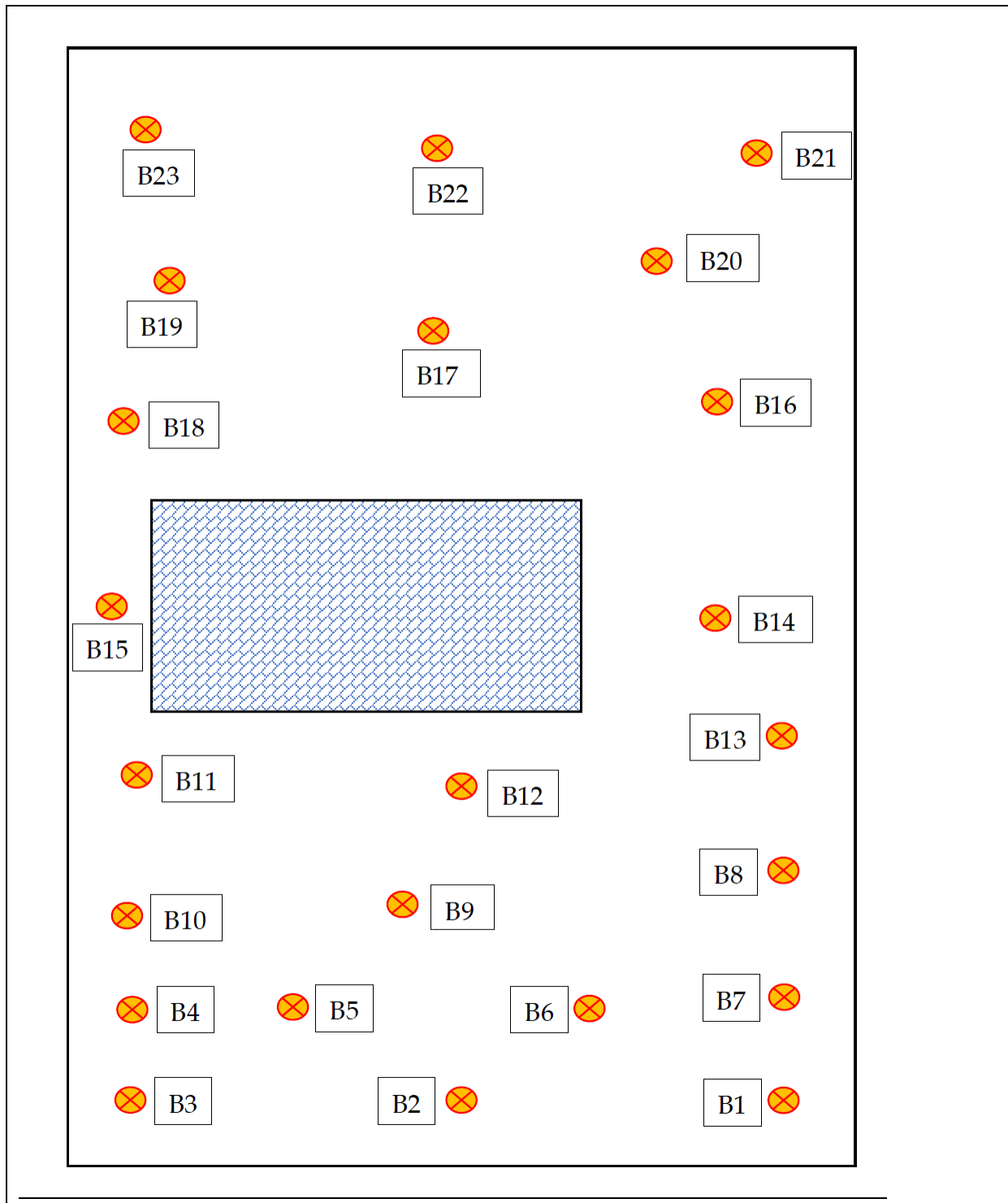


Courtesy- Google Maps



SITE PLAN & TEST LOCATIONS- Fig: 4

Note: Site Plan and Test locations are approximate





Appendix A-Site Photograph
Appendix B-Lab Test Results



Appendix-A









CHAIN OF CUSTODY RECORD

☐ Sydney Laboratory
Unit F3 Bld F, 15 Mars Rd, Lane Cove West, NSW 2066
02 9500 8400 EnviroSampleNSW@eurofins.com

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

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9900 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh VIC 3166
03 8554 5900 EnviroSampleVIC@eurofins.com

Company	DTM GEOCIVIL CONSULTANTS	Project No	JDTMG183 - 0420	Project Manager	DIVAKAR	Sampler(s)	DR / PM
Address	58 POATH ROAD KUGHESDALE	Project Name	217 GRANGE AVE MARSDEN PARK	EDD Format (ES&I, EQUIS, Custom)		Handed over by	DIVAKAR
Contact Name	DIVAKAR					Email for Invoice	dr@dtmggeoivil.com.au
Phone No	0433371080					Email for Results	dr@dtmggeoivil.com.au
Special Directions							
Purchase Order							
Quote ID No	180 208 DTM						
No	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Solid (S) Water (W)	Containers			
1	B1 - B23	17/2/18		1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass
2	(B1 - 3 samples)			40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4544 WA Guidelines)
3	(B2 - B23 - two samples)						
4							
5							
6							
7							
8							
9							
10							
Total Counts							
Method of Shipment	☐ Courier #	☒ Hand Delivered	☐ Postal	Name	Signature	Date	Time
Eurofins mgt Laboratory Use Only	Received By			DIVAKAR		17/02/18	5:30 PM
	Received By						

Calvin 17/2/18

585717



QUOTE#180208DTM

DTM Geocivil Consulting Pty Ltd
58 Poath Rd.
Hughesdale VIC 3161

Attention: Mahimadharani Sivaji

8 February 2018

Dear Mahimadharani,

Thank you for inviting Eurofins to prepare a quotation for your upcoming project. We look forward to assisting you with this project, full details of your pricing and other useful information are provided over page.

Utilising our network and our vast analysis capabilities, Eurofins is able to provide a comprehensive and seamless range of analytical services for water, air and soil, as well as food and pharmaceutical products.

If you have any questions regarding this quotation or require any further information, please don't hesitate to contact us.

Kind Regards

R. Chouman

Rhonda Chouman

Business Development Manager – VIC, NSW, ACT, NT, TAS

QUOTATION FOR ENVIRONMENTAL LABORATORY SERVICES

Client Contact	Mahimadharani Sivaji	
Client Contact Details	P : 03 8510 4074 E : mahimads@dtmgeocivil.com.au	
Project:	-	
Quotation Number	(Please use this quotation number on COCs otherwise list prices may apply)	
	Quotation # 180208DTM	Revision 0
Quotation Valid to	08/02/2019	(Extension subject to adjustment)
Eurofins Service Contact	Mary Makarios	P : 03 8564 5088 E : MaryMakarios@eurofins.com



QUOTE#180208DTM

ANALYTICAL SCOPE & RATES

Prices apply for the scope of laboratory testing requested and do not apply to secondary/QC samples unless agreed otherwise. The price provided for Analytical suites are only applicable if the suite is referenced on the chain of custody form.

— SOIL ANALYSIS —

Analysis	Sample Number	Price per Sample	Price
Suite B4* ¹ (TRH, BTEXN, PAH)	23	\$77.40	\$1,780.20
Suite B13* ¹ (OCP, PCB)	23	\$40.00	\$920.00
Asbestos Identification in Soil (AS 4694)	23	\$35.00	\$805.00
			\$152.40
Analytical cost per sample			\$3,505.20
Analytical cost for 23 samples			

*1

The price provided for Analytical suites are only applicable if the suite is referenced on the chain of custody form.

— ASSOCIATED FEES —

Associated Fees	Price
Project fee	\$30.00 per batch

Company Name: DTM Geocivil Consulting Pty Ltd
Address: PO Box 5014
Clayton
VIC 3168
Project Name: 217 GRANE AVE MARSDEN PARK
Project ID: JD TMG18S-0420

Order No.:
Report #: 585717
Phone: 03 8510 4074
Fax:

Received: Feb 19, 2018 5:07 PM
Due: Feb 26, 2018
Priority: 5 Day
Contact Name: Divakar Radhakrishnan

Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	B1-150	Feb 17, 2018		Soil	M18-Fe23414	X		X	X	X
2	B1-300	Feb 17, 2018		Soil	M18-Fe23415		X			
3	B1-600	Feb 17, 2018		Soil	M18-Fe23416		X			
4	B2-300	Feb 17, 2018		Soil	M18-Fe23417	X		X	X	X
5	B2-SURFACE	Feb 17, 2018		Soil	M18-Fe23418		X			
6	B3-300	Feb 17, 2018		Soil	M18-Fe23419	X		X	X	X
7	B3-SURFACE	Feb 17, 2018		Soil	M18-Fe23420		X			
8	B4-150	Feb 17, 2018		Soil	M18-Fe23421	X		X	X	X
9	B4-400	Feb 17, 2018		Soil	M18-Fe23422		X			

Company Name: DTM Geocivil Consulting Pty Ltd
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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	B5-300	Feb 17, 2018		Soil	M18-Fe23423		X			
11	B5-150	Feb 17, 2018		Soil	M18-Fe23424	X		X	X	X
12	B6-600	Feb 17, 2018		Soil	M18-Fe23425		X			
13	B6-150	Feb 17, 2018		Soil	M18-Fe23426	X		X	X	X
14	B7-500	Feb 17, 2018		Soil	M18-Fe23427		X			
15	B7-200	Feb 17, 2018		Soil	M18-Fe23428	X		X	X	X
16	B8-SURFACE	Feb 17, 2018		Soil	M18-Fe23429	X		X	X	X
17	B8-400	Feb 17, 2018		Soil	M18-Fe23430		X			
18	B9-400	Feb 17, 2018		Soil	M18-Fe23431		X			
19	B9-200	Feb 17, 2018		Soil	M18-Fe23432	X		X	X	X
20	B10-400	Feb 17, 2018		Soil	M18-Fe23433		X			
21	B10-	Feb 17, 2018		Soil	M18-Fe23434	X		X	X	X

Company Name: DTM Geocivil Consulting Pty Ltd
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Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
	SURFACE									
22	B11-600	Feb 17, 2018		Soil	M18-Fe23435		X			
23	B11-150	Feb 17, 2018		Soil	M18-Fe23436	X		X	X	X
24	B12-400	Feb 17, 2018		Soil	M18-Fe23437		X			
25	B12-100	Feb 17, 2018		Soil	M18-Fe23438	X		X	X	X
26	B13-400	Feb 17, 2018		Soil	M18-Fe23439		X			
27	B13-100	Feb 17, 2018		Soil	M18-Fe23440	X		X	X	X
28	B14-SURFACE	Feb 17, 2018		Soil	M18-Fe23441	X		X	X	X
29	B14-300	Feb 17, 2018		Soil	M18-Fe23442		X			
30	B15-500	Feb 17, 2018		Soil	M18-Fe23443		X			
31	B15-150	Feb 17, 2018		Soil	M18-Fe23444	X		X	X	X

Company Name: DTM Geocivil Consulting Pty Ltd
Address: PO Box 5014
Clayton
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Project Name: 217 GRANE AVE MARSDEN PARK
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Contact Name: Divakar Radhakrishnan

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Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
32	B16-SURFACE	Feb 17, 2018		Soil	M18-Fe23445		X			
33	B16-300	Feb 17, 2018		Soil	M18-Fe23446	X		X	X	X
34	B17-150	Feb 17, 2018		Soil	M18-Fe23447		X			
35	B17-500	Feb 17, 2018		Soil	M18-Fe23448	X		X	X	X
36	B18-400	Feb 17, 2018		Soil	M18-Fe23449	X		X	X	X
37	B18-150	Feb 17, 2018		Soil	M18-Fe23450		X			
38	B19-SURFACE	Feb 17, 2018		Soil	M18-Fe23451	X		X	X	X
39	B19-300	Feb 17, 2018		Soil	M18-Fe23452		X			
40	B20-150	Feb 17, 2018		Soil	M18-Fe23453	X		X	X	X
41	B20-400	Feb 17, 2018		Soil	M18-Fe23454		X			
42	B21-400	Feb 17, 2018		Soil	M18-Fe23455		X			

Company Name: DTM Geocivil Consulting Pty Ltd
Address: PO Box 5014
Clayton
VIC 3168
Project Name: 217 GRANE AVE MARSDEN PARK
Project ID: JDTMG18S-0420

Order No.:
Report #: 585717
Phone: 03 8510 4074
Fax:

Received: Feb 19, 2018 5:07 PM
Due: Feb 26, 2018
Priority: 5 Day
Contact Name: Divakar Radhakrishnan

Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
43	B21-100	Feb 17, 2018		Soil	M18-Fe23456	X		X	X	X
44	B22-SURFACE	Feb 17, 2018		Soil	M18-Fe23457	X		X	X	X
45	B22-300	Feb 17, 2018		Soil	M18-Fe23458		X			
46	B23-500	Feb 17, 2018		Soil	M18-Fe23459		X			
47	B23-150	Feb 17, 2018		Soil	M18-Fe23460	X		X	X	X
Test Counts						23	24	23	23	23

Certificate of Analysis



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.

DTM Geocivil Consulting Pty Ltd
PO Box 5014
Clayton
VIC 3168

Attention: Divakar Radhakrishnan
Report 585717-AID
Project Name 217 GRANE AVE MARSDEN PARK
Project ID JDTMG18S-0420
Received Date Feb 19, 2018
Date Reported Feb 27, 2018

Methodology:

Asbestos Fibre
Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
containing material
(ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS4964 method for inhomogeneous samples is around 0.1 g/kg (0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis where required, this is considered to be at the nominal reporting limit of 0.01 % (w / w). The examination of large sample sizes (500 mL is recommended) may improve the likelihood of identifying ACM in the > 2mm fraction. The NEPM screening level of 0.001 % (w / w) asbestos in soil for FA (friable asbestos) and AF (asbestos fines) then applies where they are able to be quantified by gravimetric procedures. This quantitative screening is not generally applicable to FF (free fibres) and results of Trace Analysis are referred.

NOTE: NATA News March 2014, p.7, states in relation to AS4964: "This is a qualitative method with a nominal reporting limit of 0.01%" and that currently in Australia "there is no validated method available for the quantification of asbestos". Accordingly, NATA Accreditation does not cover the performance of this service (indicated with an asterisk). This report is consistent with the analytical procedures and reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended) and the Western Australia Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, 2009, including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil, June 2011.

Project Name 217 GRANE AVE MARSDEN PARK
Project ID JDTMG18S-0420
Date Sampled Feb 17, 2018
Report 585717-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B1-150	18-Fe23414	Feb 17, 2018	Approximate Sample 75g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B2-300	18-Fe23417	Feb 17, 2018	Approximate Sample 76g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B3-300	18-Fe23419	Feb 17, 2018	Approximate Sample 70g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B4-150	18-Fe23421	Feb 17, 2018	Approximate Sample 84g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B5-150	18-Fe23424	Feb 17, 2018	Approximate Sample 89g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B6-150	18-Fe23426	Feb 17, 2018	Approximate Sample 81g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B7-200	18-Fe23428	Feb 17, 2018	Approximate Sample 83g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B8-SURFACE	18-Fe23429	Feb 17, 2018	Approximate Sample 96g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B9-200	18-Fe23432	Feb 17, 2018	Approximate Sample 97g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B10-SURFACE	18-Fe23434	Feb 17, 2018	Approximate Sample 109g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
B11-150	18-Fe23436	Feb 17, 2018	Approximate Sample 93g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B12-100	18-Fe23438	Feb 17, 2018	Approximate Sample 52g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B13-100	18-Fe23440	Feb 17, 2018	Approximate Sample 9g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B14-SURFACE	18-Fe23441	Feb 17, 2018	Approximate Sample 9g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B15-150	18-Fe23444	Feb 17, 2018	Approximate Sample 71g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B16-300	18-Fe23446	Feb 17, 2018	Approximate Sample 47g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B17-500	18-Fe23448	Feb 17, 2018	Approximate Sample 66g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B18-400	18-Fe23449	Feb 17, 2018	Approximate Sample 86g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B19-SURFACE	18-Fe23451	Feb 17, 2018	Approximate Sample 79g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B20-150	18-Fe23453	Feb 17, 2018	Approximate Sample 71g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B21-100	18-Fe23456	Feb 17, 2018	Approximate Sample 91g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B22-SURFACE	18-Fe23457	Feb 17, 2018	Approximate Sample 69g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
B23-150	18-Fe23460	Feb 17, 2018	Approximate Sample 71g Sample consisted of: Brwon fine grain soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

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 (regarding both quality and NATA accreditation).

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
Asbestos - LTM-ASB-8020	Sydney	Feb 21, 2018	Indefinite

Company Name: DTM Geocivil Consulting Pty Ltd
Address: PO Box 5014
Clayton
VIC 3168

Project Name: 217 GRANE AVE MARSDEN PARK
Project ID: JDTMG18S-0420

Order No.:
Report #: 585717
Phone: 03 8510 4074
Fax:

Received: Feb 19, 2018 5:07 PM
Due: Feb 26, 2018
Priority: 5 Day
Contact Name: Divakar Radhakrishnan

Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	B1-150	Feb 17, 2018		Soil	M18-Fe23414	X		X	X	X
2	B1-300	Feb 17, 2018		Soil	M18-Fe23415		X			
3	B1-600	Feb 17, 2018		Soil	M18-Fe23416		X			
4	B2-300	Feb 17, 2018		Soil	M18-Fe23417	X		X	X	X
5	B2-SURFACE	Feb 17, 2018		Soil	M18-Fe23418		X			
6	B3-300	Feb 17, 2018		Soil	M18-Fe23419	X		X	X	X
7	B3-SURFACE	Feb 17, 2018		Soil	M18-Fe23420		X			
8	B4-150	Feb 17, 2018		Soil	M18-Fe23421	X		X	X	X
9	B4-400	Feb 17, 2018		Soil	M18-Fe23422		X			

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	B5-300	Feb 17, 2018		Soil	M18-Fe23423		X			
11	B5-150	Feb 17, 2018		Soil	M18-Fe23424	X		X	X	X
12	B6-600	Feb 17, 2018		Soil	M18-Fe23425		X			
13	B6-150	Feb 17, 2018		Soil	M18-Fe23426	X		X	X	X
14	B7-500	Feb 17, 2018		Soil	M18-Fe23427		X			
15	B7-200	Feb 17, 2018		Soil	M18-Fe23428	X		X	X	X
16	B8-SURFACE	Feb 17, 2018		Soil	M18-Fe23429	X		X	X	X
17	B8-400	Feb 17, 2018		Soil	M18-Fe23430		X			
18	B9-400	Feb 17, 2018		Soil	M18-Fe23431		X			
19	B9-200	Feb 17, 2018		Soil	M18-Fe23432	X		X	X	X
20	B10-400	Feb 17, 2018		Soil	M18-Fe23433		X			
21	B10-	Feb 17, 2018		Soil	M18-Fe23434	X		X	X	X

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Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
	SURFACE									
22	B11-600	Feb 17, 2018		Soil	M18-Fe23435		X			
23	B11-150	Feb 17, 2018		Soil	M18-Fe23436	X		X	X	X
24	B12-400	Feb 17, 2018		Soil	M18-Fe23437		X			
25	B12-100	Feb 17, 2018		Soil	M18-Fe23438	X		X	X	X
26	B13-400	Feb 17, 2018		Soil	M18-Fe23439		X			
27	B13-100	Feb 17, 2018		Soil	M18-Fe23440	X		X	X	X
28	B14-SURFACE	Feb 17, 2018		Soil	M18-Fe23441	X		X	X	X
29	B14-300	Feb 17, 2018		Soil	M18-Fe23442		X			
30	B15-500	Feb 17, 2018		Soil	M18-Fe23443		X			
31	B15-150	Feb 17, 2018		Soil	M18-Fe23444	X		X	X	X

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Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
32	B16-SURFACE	Feb 17, 2018		Soil	M18-Fe23445		X			
33	B16-300	Feb 17, 2018		Soil	M18-Fe23446	X		X	X	X
34	B17-150	Feb 17, 2018		Soil	M18-Fe23447		X			
35	B17-500	Feb 17, 2018		Soil	M18-Fe23448	X		X	X	X
36	B18-400	Feb 17, 2018		Soil	M18-Fe23449	X		X	X	X
37	B18-150	Feb 17, 2018		Soil	M18-Fe23450		X			
38	B19-SURFACE	Feb 17, 2018		Soil	M18-Fe23451	X		X	X	X
39	B19-300	Feb 17, 2018		Soil	M18-Fe23452		X			
40	B20-150	Feb 17, 2018		Soil	M18-Fe23453	X		X	X	X
41	B20-400	Feb 17, 2018		Soil	M18-Fe23454		X			
42	B21-400	Feb 17, 2018		Soil	M18-Fe23455		X			

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Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
43	B21-100	Feb 17, 2018		Soil	M18-Fe23456	X		X	X	X
44	B22-SURFACE	Feb 17, 2018		Soil	M18-Fe23457	X		X	X	X
45	B22-300	Feb 17, 2018		Soil	M18-Fe23458		X			
46	B23-500	Feb 17, 2018		Soil	M18-Fe23459		X			
47	B23-150	Feb 17, 2018		Soil	M18-Fe23460	X		X	X	X
Test Counts						23	24	23	23	23

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. 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 Sample Receipt Advice.

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.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

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

Comments

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Authorised by:

Matthew Quigley

Senior Analyst-Asbestos (NSW)



Glenn Jackson
National Operations Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

Eurofins | mgt 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 | mgt 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.

Certificate of Analysis

DTM Geocivil Consulting Pty Ltd
 PO Box 5014
 Clayton
 VIC 3168



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: Divakar Radhakrishnan

Report 585717-S
 Project name 217 GRANE AVE MARSDEN PARK
 Project ID JDTMG18S-0420
 Received Date Feb 19, 2018

Client Sample ID			B1-150 Soil	B2-300 Soil	B3-300 Soil	B4-150 Soil
Sample Matrix			M18-Fe23414	M18-Fe23417	M18-Fe23419	M18-Fe23421
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	81	93	91	100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			B1-150 Soil	B2-300 Soil	B3-300 Soil	B4-150 Soil
Sample Matrix			M18-Fe23414	M18-Fe23417	M18-Fe23419	M18-Fe23421
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	98	87	85	83
p-Terphenyl-d14 (surr.)	1	%	106	102	106	104
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	< 0.05	< 0.05	< 0.05	< 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	< 0.05	< 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	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	118	121	117
Tetrachloro-m-xylene (surr.)	1	%	63	70	104	92
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	118	121	117
Tetrachloro-m-xylene (surr.)	1	%	63	70	104	92
% Moisture	1	%	6.0	13	15	5.3

Client Sample ID			B5-150 Soil	B6-150 Soil	B7-200 Soil	B8-SURFACE Soil
Sample Matrix			M18-Fe23424	M18-Fe23426	M18-Fe23428	M18-Fe23429
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	122	98	98	100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	78	120	98	92
p-Terphenyl-d14 (surr.)	1	%	89	119	140	132
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	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B5-150 Soil M18-Fe23424 Feb 17, 2018	B6-150 Soil M18-Fe23426 Feb 17, 2018	B7-200 Soil M18-Fe23428 Feb 17, 2018	B8-SURFACE Soil M18-Fe23429 Feb 17, 2018
Organochlorine Pesticides						
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	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	109	100	104	82
Tetrachloro-m-xylene (surr.)	1	%	50	73	73	124
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	109	100	104	82
Tetrachloro-m-xylene (surr.)	1	%	50	73	73	124
% Moisture	1	%	6.5	7.5	10	4.3

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B9-200 Soil M18-Fe23432 Feb 17, 2018	B10-SURFACE Soil M18-Fe23434 Feb 17, 2018	B11-150 Soil M18-Fe23436 Feb 17, 2018	B12-100 Soil M18-Fe23438 Feb 17, 2018
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			B9-200 Soil M18-Fe23432 Feb 17, 2018	B10-SURFACE Soil M18-Fe23434 Feb 17, 2018	B11-150 Soil M18-Fe23436 Feb 17, 2018	B12-100 Soil M18-Fe23438 Feb 17, 2018
Sample Matrix						
Eurofins mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	106	93	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	91	90	93	96
p-Terphenyl-d14 (surr.)	1	%	137	130	149	115
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	< 0.05	< 0.05	< 0.05	< 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	< 0.05	< 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

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B9-200 Soil M18-Fe23432 Feb 17, 2018	B10-SURFACE Soil M18-Fe23434 Feb 17, 2018	B11-150 Soil M18-Fe23436 Feb 17, 2018	B12-100 Soil M18-Fe23438 Feb 17, 2018
Organochlorine Pesticides						
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	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	96	100	104	80
Tetrachloro-m-xylene (surr.)	1	%	136	85	65	103
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	96	100	104	80
Tetrachloro-m-xylene (surr.)	1	%	136	85	65	103
% Moisture	1	%	4.9	4.0	7.2	5.5

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B13-100 Soil M18-Fe23440 Feb 17, 2018	B14-SURFACE Soil M18-Fe23441 Feb 17, 2018	B15-150 Soil M18-Fe23444 Feb 17, 2018	B16-300 Soil M18-Fe23446 Feb 17, 2018
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B13-100 Soil M18-Fe23440 Feb 17, 2018	B14-SURFACE Soil M18-Fe23441 Feb 17, 2018	B15-150 Soil M18-Fe23444 Feb 17, 2018	B16-300 Soil M18-Fe23446 Feb 17, 2018
BTEX						
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	72	72	70	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	85	94	92	84
p-Terphenyl-d14 (surr.)	1	%	110	111	146	103
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	< 0.05	< 0.05	< 0.05	< 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	< 0.05	< 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

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B13-100 Soil M18-Fe23440 Feb 17, 2018	B14-SURFACE Soil M18-Fe23441 Feb 17, 2018	B15-150 Soil M18-Fe23444 Feb 17, 2018	B16-300 Soil M18-Fe23446 Feb 17, 2018
Organochlorine Pesticides						
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	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	109	113	85	105
Tetrachloro-m-xylene (surr.)	1	%	68	64	79	103
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	109	113	85	105
Tetrachloro-m-xylene (surr.)	1	%	68	64	79	103
% Moisture	1	%	4.5	4.7	6.3	11

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B17-500 Soil M18-Fe23448 Feb 17, 2018	B18-400 Soil M18-Fe23449 Feb 17, 2018	B19-SURFACE Soil M18-Fe23451 Feb 17, 2018	B20-150 Soil M18-Fe23453 Feb 17, 2018
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	73	64	73	71

Client Sample ID			B17-500 Soil	B18-400 Soil	B19-SURFACE Soil	B20-150 Soil
Sample Matrix			M18-Fe23448	M18-Fe23449	M18-Fe23451	M18-Fe23453
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	79	89	80	84
p-Terphenyl-d14 (surr.)	1	%	100	96	95	95
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	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
α-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
β-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
δ-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
γ-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

Client Sample ID			B17-500 Soil	B18-400 Soil	B19-SURFACE Soil	B20-150 Soil
Sample Matrix			M18-Fe23448	M18-Fe23449	M18-Fe23451	M18-Fe23453
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorobenzene (surr.)	1	%	95	124	138	131
Tetrachloro-m-xylene (surr.)	1	%	92	94	73	77
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorobenzene (surr.)	1	%	95	124	138	131
Tetrachloro-m-xylene (surr.)	1	%	92	94	73	77
% Moisture	1	%	12	9.6	4.7	5.5

Client Sample ID			B21-100 Soil	B22-SURFACE Soil	B23-150 Soil
Sample Matrix			M18-Fe23456	M18-Fe23457	M18-Fe23460
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled					
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	74	70	75
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50

Client Sample ID			B21-100 Soil	B22-SURFACE Soil	B23-150 Soil
Sample Matrix			M18-Fe23456	M18-Fe23457	M18-Fe23460
Eurofins mgt Sample No.			Feb 17, 2018	Feb 17, 2018	Feb 17, 2018
Date Sampled					
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	88	88	81
p-Terphenyl-d14 (surr.)	1	%	105	55	105
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
α-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
β-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
δ-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
γ-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	B21-100 Soil M18-Fe23456 Feb 17, 2018	B22-SURFACE Soil M18-Fe23457 Feb 17, 2018	B23-150 Soil M18-Fe23460 Feb 17, 2018
Organochlorine Pesticides					
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	139	106	88
Tetrachloro-m-xylene (surr.)	1	%	108	94	82
Polychlorinated Biphenyls					
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	139	106	88
Tetrachloro-m-xylene (surr.)	1	%	108	94	82
% Moisture	1	%	5.8	4.9	4.8

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 (regarding both quality and NATA accreditation).

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
Eurofins mgt Suite B4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Feb 21, 2018	14 Day
- Method: LTM-ORG-2010 TRH C6-C36			
BTEX	Melbourne	Feb 21, 2018	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Feb 21, 2018	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Feb 21, 2018	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Feb 21, 2018	14 Day
- Method: LTM-ORG-2130 PAH and Phenols in Soils by GCMS			
Eurofins mgt Suite B13			
Organochlorine Pesticides	Melbourne	Feb 21, 2018	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Melbourne	Feb 21, 2018	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Melbourne	Feb 21, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

Company Name: DTM Geocivil Consulting Pty Ltd
Address: PO Box 5014
Clayton
VIC 3168
Project Name: 217 GRANE AVE MARSDEN PARK
Project ID: JDTMG18S-0420

Order No.:
Report #: 585717
Phone: 03 8510 4074
Fax:

Received: Feb 19, 2018 5:07 PM
Due: Feb 26, 2018
Priority: 5 Day
Contact Name: Divakar Radhakrishnan

Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	B1-150	Feb 17, 2018		Soil	M18-Fe23414	X		X	X	X
2	B1-300	Feb 17, 2018		Soil	M18-Fe23415		X			
3	B1-600	Feb 17, 2018		Soil	M18-Fe23416		X			
4	B2-300	Feb 17, 2018		Soil	M18-Fe23417	X		X	X	X
5	B2-SURFACE	Feb 17, 2018		Soil	M18-Fe23418		X			
6	B3-300	Feb 17, 2018		Soil	M18-Fe23419	X		X	X	X
7	B3-SURFACE	Feb 17, 2018		Soil	M18-Fe23420		X			
8	B4-150	Feb 17, 2018		Soil	M18-Fe23421	X		X	X	X
9	B4-400	Feb 17, 2018		Soil	M18-Fe23422		X			

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Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	B5-300	Feb 17, 2018		Soil	M18-Fe23423		X			
11	B5-150	Feb 17, 2018		Soil	M18-Fe23424	X		X	X	X
12	B6-600	Feb 17, 2018		Soil	M18-Fe23425		X			
13	B6-150	Feb 17, 2018		Soil	M18-Fe23426	X		X	X	X
14	B7-500	Feb 17, 2018		Soil	M18-Fe23427		X			
15	B7-200	Feb 17, 2018		Soil	M18-Fe23428	X		X	X	X
16	B8-SURFACE	Feb 17, 2018		Soil	M18-Fe23429	X		X	X	X
17	B8-400	Feb 17, 2018		Soil	M18-Fe23430		X			
18	B9-400	Feb 17, 2018		Soil	M18-Fe23431		X			
19	B9-200	Feb 17, 2018		Soil	M18-Fe23432	X		X	X	X
20	B10-400	Feb 17, 2018		Soil	M18-Fe23433		X			
21	B10-	Feb 17, 2018		Soil	M18-Fe23434	X		X	X	X

Company Name: DTM Geocivil Consulting Pty Ltd
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Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
	SURFACE									
22	B11-600	Feb 17, 2018		Soil	M18-Fe23435		X			
23	B11-150	Feb 17, 2018		Soil	M18-Fe23436	X		X	X	X
24	B12-400	Feb 17, 2018		Soil	M18-Fe23437		X			
25	B12-100	Feb 17, 2018		Soil	M18-Fe23438	X		X	X	X
26	B13-400	Feb 17, 2018		Soil	M18-Fe23439		X			
27	B13-100	Feb 17, 2018		Soil	M18-Fe23440	X		X	X	X
28	B14-SURFACE	Feb 17, 2018		Soil	M18-Fe23441	X		X	X	X
29	B14-300	Feb 17, 2018		Soil	M18-Fe23442		X			
30	B15-500	Feb 17, 2018		Soil	M18-Fe23443		X			
31	B15-150	Feb 17, 2018		Soil	M18-Fe23444	X		X	X	X

Company Name: DTM Geocivil Consulting Pty Ltd
Address: PO Box 5014
Clayton
VIC 3168
Project Name: 217 GRANE AVE MARSDEN PARK
Project ID: JD TMG18S-0420

Order No.:
Report #: 585717
Phone: 03 8510 4074
Fax:

Received: Feb 19, 2018 5:07 PM
Due: Feb 26, 2018
Priority: 5 Day
Contact Name: Divakar Radhakrishnan

Eurofins | mgt Analytical Services Manager : Liam Prescott

Sample Detail						Asbestos - AS4964	HOLD	Eurofins mgt Suite B13	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
32	B16-SURFACE	Feb 17, 2018		Soil	M18-Fe23445		X			
33	B16-300	Feb 17, 2018		Soil	M18-Fe23446	X		X	X	X
34	B17-150	Feb 17, 2018		Soil	M18-Fe23447		X			
35	B17-500	Feb 17, 2018		Soil	M18-Fe23448	X		X	X	X
36	B18-400	Feb 17, 2018		Soil	M18-Fe23449	X		X	X	X
37	B18-150	Feb 17, 2018		Soil	M18-Fe23450		X			
38	B19-SURFACE	Feb 17, 2018		Soil	M18-Fe23451	X		X	X	X
39	B19-300	Feb 17, 2018		Soil	M18-Fe23452		X			
40	B20-150	Feb 17, 2018		Soil	M18-Fe23453	X		X	X	X
41	B20-400	Feb 17, 2018		Soil	M18-Fe23454		X			
42	B21-400	Feb 17, 2018		Soil	M18-Fe23455		X			

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X
Sydney Laboratory - NATA Site # 18217						X				
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
43	B21-100	Feb 17, 2018		Soil	M18-Fe23456	X		X	X	X
44	B22-SURFACE	Feb 17, 2018		Soil	M18-Fe23457	X		X	X	X
45	B22-300	Feb 17, 2018		Soil	M18-Fe23458		X			
46	B23-500	Feb 17, 2018		Soil	M18-Fe23459		X			
47	B23-150	Feb 17, 2018		Soil	M18-Fe23460	X		X	X	X
Test Counts						23	24	23	23	23

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 Sample Receipt Advice.

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.

****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	Quality Systems Manual ver 5.1 US Department of Defense
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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. 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.
2. 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.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. 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.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. 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							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	128			70-130	Pass	
TRH C10-C14	%	87			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	123			70-130	Pass	
Ethylbenzene	%	126			70-130	Pass	
m&p-Xylenes	%	126			70-130	Pass	
Xylenes - Total	%	126			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	116			70-130	Pass	
TRH C6-C10	%	118			70-130	Pass	
TRH >C10-C16	%	85			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	88			70-130	Pass	
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	78			70-130	Pass	
Benz(a)anthracene	%	72			70-130	Pass	
Benzo(a)pyrene	%	72			70-130	Pass	
Benzo(b&j)fluoranthene	%	97			70-130	Pass	
Benzo(g,h,i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	89			70-130	Pass	
Dibenz(a,h)anthracene	%	77			70-130	Pass	
Fluoranthene	%	115			70-130	Pass	
Fluorene	%	93			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	72			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	96			70-130	Pass	
Pyrene	%	112			70-130	Pass	

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery										
Organochlorine Pesticides										
4.4'-DDD				%	103			70-130	Pass	
4.4'-DDE				%	106			70-130	Pass	
4.4'-DDT				%	104			70-130	Pass	
a-BHC				%	119			70-130	Pass	
Aldrin				%	128			70-130	Pass	
b-BHC				%	105			70-130	Pass	
d-BHC				%	98			70-130	Pass	
Dieldrin				%	112			70-130	Pass	
Endosulfan I				%	115			70-130	Pass	
Endosulfan II				%	101			70-130	Pass	
Endosulfan sulphate				%	102			70-130	Pass	
Endrin				%	118			70-130	Pass	
Endrin aldehyde				%	103			70-130	Pass	
Endrin ketone				%	98			70-130	Pass	
g-BHC (Lindane)				%	117			70-130	Pass	
Heptachlor				%	122			70-130	Pass	
Heptachlor epoxide				%	126			70-130	Pass	
Hexachlorobenzene				%	123			70-130	Pass	
Methoxychlor				%	94			70-130	Pass	
Test	Lab Sample ID	QA Source		Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery										
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					Result 1					
TRH C10-C14	M18-Fe23425	CP	%		124			70-130	Pass	
Spike - % Recovery										
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1					
TRH >C10-C16	M18-Fe23425	CP	%		115			70-130	Pass	
Spike - % Recovery										
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					Result 1					
TRH C6-C9	M18-Fe23426	CP	%		120			70-130	Pass	
Spike - % Recovery										
BTEX					Result 1					
Benzene	M18-Fe23426	CP	%		104			70-130	Pass	
Toluene	M18-Fe23426	CP	%		116			70-130	Pass	
Ethylbenzene	M18-Fe23426	CP	%		123			70-130	Pass	
m&p-Xylenes	M18-Fe23426	CP	%		125			70-130	Pass	
o-Xylene	M18-Fe23426	CP	%		124			70-130	Pass	
Xylenes - Total	M18-Fe23426	CP	%		125			70-130	Pass	
Spike - % Recovery										
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1					
Naphthalene	M18-Fe23426	CP	%		125			70-130	Pass	
TRH C6-C10	M18-Fe23426	CP	%		114			70-130	Pass	
Spike - % Recovery										
Organochlorine Pesticides					Result 1					
4.4'-DDD	M18-Fe23426	CP	%		99			70-130	Pass	
4.4'-DDE	M18-Fe23426	CP	%		117			70-130	Pass	
4.4'-DDT	M18-Fe23426	CP	%		112			70-130	Pass	
a-BHC	M18-Fe23426	CP	%		89			70-130	Pass	
Aldrin	M18-Fe23426	CP	%		93			70-130	Pass	
b-BHC	M18-Fe23426	CP	%		110			70-130	Pass	
d-BHC	M18-Fe23426	CP	%		110			70-130	Pass	
Dieldrin	M18-Fe23426	CP	%		127			70-130	Pass	
Endosulfan I	M18-Fe23426	CP	%		91			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	M18-Fe23426	CP	%	93			70-130	Pass	
Endosulfan sulphate	M18-Fe23426	CP	%	100			70-130	Pass	
Endrin	M18-Fe23426	CP	%	128			70-130	Pass	
Endrin aldehyde	M18-Fe23426	CP	%	89			70-130	Pass	
Endrin ketone	M18-Fe23426	CP	%	90			70-130	Pass	
g-BHC (Lindane)	M18-Fe23426	CP	%	88			70-130	Pass	
Heptachlor	M18-Fe23426	CP	%	87			70-130	Pass	
Heptachlor epoxide	M18-Fe23426	CP	%	130			70-130	Pass	
Hexachlorobenzene	M18-Fe23426	CP	%	89			70-130	Pass	
Methoxychlor	M18-Fe23426	CP	%	79			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M18-Fe23436	CP	%	105			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M18-Fe23436	CP	%	100			70-130	Pass	
Toluene	M18-Fe23436	CP	%	110			70-130	Pass	
Ethylbenzene	M18-Fe23436	CP	%	115			70-130	Pass	
m&p-Xylenes	M18-Fe23436	CP	%	116			70-130	Pass	
o-Xylene	M18-Fe23436	CP	%	116			70-130	Pass	
Xylenes - Total	M18-Fe23436	CP	%	116			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M18-Fe23436	CP	%	100			70-130	Pass	
TRH C6-C10	M18-Fe23436	CP	%	99			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4,4'-DDD	M18-Fe23436	CP	%	120			70-130	Pass	
4,4'-DDE	M18-Fe23436	CP	%	108			70-130	Pass	
4,4'-DDT	M18-Fe23436	CP	%	84			70-130	Pass	
a-BHC	M18-Fe23436	CP	%	86			70-130	Pass	
Aldrin	M18-Fe23436	CP	%	102			70-130	Pass	
b-BHC	M18-Fe23436	CP	%	82			70-130	Pass	
d-BHC	M18-Fe23436	CP	%	87			70-130	Pass	
Dieldrin	M18-Fe23436	CP	%	105			70-130	Pass	
Endosulfan I	M18-Fe23436	CP	%	103			70-130	Pass	
Endosulfan II	M18-Fe23436	CP	%	106			70-130	Pass	
Endosulfan sulphate	M18-Fe23436	CP	%	112			70-130	Pass	
Endrin	M18-Fe23436	CP	%	108			70-130	Pass	
Endrin aldehyde	M18-Fe23436	CP	%	101			70-130	Pass	
Endrin ketone	M18-Fe23436	CP	%	105			70-130	Pass	
g-BHC (Lindane)	M18-Fe23436	CP	%	87			70-130	Pass	
Heptachlor	M18-Fe23436	CP	%	103			70-130	Pass	
Heptachlor epoxide	M18-Fe23436	CP	%	100			70-130	Pass	
Hexachlorobenzene	M18-Fe23436	CP	%	82			70-130	Pass	
Methoxychlor	M18-Fe23436	CP	%	86			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M18-Fe23440	CP	%	84			70-130	Pass	
Acenaphthylene	M18-Fe23440	CP	%	84			70-130	Pass	
Anthracene	M18-Fe23440	CP	%	126			70-130	Pass	
Benz(a)anthracene	M18-Fe23440	CP	%	113			70-130	Pass	
Benzo(a)pyrene	M18-Fe23440	CP	%	77			70-130	Pass	
Benzo(b&j)fluoranthene	M18-Fe23440	CP	%	97			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g,h,i)perylene	M18-Fe23440	CP	%	73			70-130	Pass	
Benzo(k)fluoranthene	M18-Fe23440	CP	%	93			70-130	Pass	
Chrysene	M18-Fe23440	CP	%	112			70-130	Pass	
Dibenz(a,h)anthracene	M18-Fe23440	CP	%	81			70-130	Pass	
Fluoranthene	M18-Fe23440	CP	%	93			70-130	Pass	
Fluorene	M18-Fe23440	CP	%	97			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M18-Fe23440	CP	%	75			70-130	Pass	
Naphthalene	M18-Fe23440	CP	%	79			70-130	Pass	
Phenanthrene	M18-Fe23440	CP	%	70			70-130	Pass	
Pyrene	M18-Fe23440	CP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M18-Fe23446	CP	%	95			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M18-Fe23446	CP	%	70			70-130	Pass	
Toluene	M18-Fe23446	CP	%	78			70-130	Pass	
Ethylbenzene	M18-Fe23446	CP	%	84			70-130	Pass	
m&p-Xylenes	M18-Fe23446	CP	%	86			70-130	Pass	
o-Xylene	M18-Fe23446	CP	%	87			70-130	Pass	
Xylenes - Total	M18-Fe23446	CP	%	86			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M18-Fe23446	CP	%	93			70-130	Pass	
TRH C6-C10	M18-Fe23446	CP	%	94			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4,4'-DDD	M18-Fe23446	CP	%	83			70-130	Pass	
4,4'-DDE	M18-Fe23446	CP	%	93			70-130	Pass	
4,4'-DDT	M18-Fe23446	CP	%	84			70-130	Pass	
a-BHC	M18-Fe23446	CP	%	116			70-130	Pass	
Aldrin	M18-Fe23446	CP	%	123			70-130	Pass	
b-BHC	M18-Fe23446	CP	%	97			70-130	Pass	
d-BHC	M18-Fe23446	CP	%	94			70-130	Pass	
Dieldrin	M18-Fe23446	CP	%	102			70-130	Pass	
Endosulfan I	M18-Fe23446	CP	%	91			70-130	Pass	
Endosulfan II	M18-Fe23446	CP	%	77			70-130	Pass	
Endosulfan sulphate	M18-Fe23446	CP	%	93			70-130	Pass	
Endrin	M18-Fe23446	CP	%	110			70-130	Pass	
Endrin aldehyde	M18-Fe23446	CP	%	76			70-130	Pass	
Endrin ketone	M18-Fe23446	CP	%	90			70-130	Pass	
g-BHC (Lindane)	M18-Fe23446	CP	%	116			70-130	Pass	
Heptachlor	M18-Fe23446	CP	%	116			70-130	Pass	
Heptachlor epoxide	M18-Fe23446	CP	%	117			70-130	Pass	
Hexachlorobenzene	M18-Fe23446	CP	%	123			70-130	Pass	
Methoxychlor	M18-Fe23446	CP	%	91			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M18-Fe23448	CP	%	100			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M18-Fe23414	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M18-Fe23414	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M18-Fe23414	CP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M18-Fe23414	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M18-Fe23414	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M18-Fe23414	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M18-Fe23417	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M18-Fe23417	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M18-Fe23417	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M18-Fe23419	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	M18-Fe23424	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M18-Fe23424	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M18-Fe23424	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M18-Fe23424	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M18-Fe23424	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M18-Fe23424	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	M18-Fe23429	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M18-Fe23429	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M18-Fe23429	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M18-Fe23429	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M18-Fe23429	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M18-Fe23429	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M18-Fe23434	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	M18-Fe23434	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M18-Fe23434	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M18-Fe23434	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
BTX				Result 1	Result 2	RPD		
Benzene	M18-Fe23434	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M18-Fe23434	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M18-Fe23434	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M18-Fe23434	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M18-Fe23434	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	M18-Fe23434	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M18-Fe23434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M18-Fe23434	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	M18-Fe23434	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M18-Fe23434	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M18-Fe23434	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	M18-Fe23435	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
BTX				Result 1	Result 2	RPD		
Benzene	M18-Fe23435	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M18-Fe23435	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M18-Fe23435	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M18-Fe23435	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M18-Fe23435	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	M18-Fe23435	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M18-Fe23435	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M18-Fe23435	CP	mg/kg	< 20	< 20	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M18-Fe23437	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M18-Fe23437	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M18-Fe23437	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	M18-Fe23444	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M18-Fe23444	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M18-Fe23444	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	M18-Fe23444	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M18-Fe23444	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M18-Fe23444	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Fluorene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M18-Fe23449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M18-Fe23453	CP	%	5.5	6.3	13	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

Comments

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
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

Authorised By

Liam Prescott	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Michael Brancati	Senior Analyst-Inorganic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations 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 Advice

Company name: **DTM Geocivil Consulting Pty Ltd**
Contact name: **Divakar Radhakrishnan**
Project name: **217 GRANE AVE MARSDEN PARK**
Project ID: **JDTMG18S-0420**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Feb 19, 2018 5:07 PM**
Eurofins | mgt reference: **585717**

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:

Liam Prescott on Phone : or by e.mail: LiamPrescott@eurofins.com

Results will be delivered electronically via e.mail to Divakar Radhakrishnan - dr@dtmgeocivil.com.au.