

ATTACHMENT 11

AIR QUALITY REPORT



**Boral Construction Materials
Materials Technical Services**

Unit 4, 3-5 Gibbon Road
Baulkham Hills NSW 2153 Australia
PO Box 400, Winston Hills NSW 2153

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www.boral.com.au

TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No: 250 / 18

PROJECT: Gravimetric Dust Monitoring at Maroota for July 2018

REQUEST No.:79667

TEST PROCEDURE: AS 3580.10.1 – 2003 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	208179	208180	208181	208182	208183
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	2.07.18	to		2.08.18

TEST RESULTS:

Insoluble Solids (g/m ² month)	1.71	2.11	2.85	2.26	2.80
Ash (g/m ² month)	1.17	1.44	1.83	1.63	2.10
Combustible Matter (g/m ² month)	0.54	0.67	1.02	0.63	0.69
Soluble Matter (g/m ² month)	1.08	1.28	1.09	1.21	1.20
Total Solids (g/m ² month)	2.80	3.39	3.94	3.47	4.00
Volume of Liquid in the Gauge (ml)	400	400	350	400	400

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- From 2nd of July, Started New Monitoring Site No. 5.

J.Graham, Mat.File, File.



Approved Signatory

S. Krishnamoorthy

S.Krishnamoorthy

Date

9.8.18

Serial No.

170495

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No: 250 / 18

PROJECT: Gravimetric Dust Monitoring at Maroota for August 2018

REQUEST No.:80148

TEST PROCEDURE: AS 3580.10.1 – 2003 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	209768	209769	209770	209771	209772
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	2.08.18	to	1.09.18	

TEST RESULTS:

Insoluble Solids (g/m ² month)	3.08	2.25	2.87	2.57	2.97
Ash (g/m ² month)	1.90	0.88	1.62	1.43	1.61
Combustible Matter (g/m ² month)	1.18	1.37	1.24	1.14	1.36
Soluble Matter (g/m ² month)	0.14	0.01	0.08	1.33	0.46
Total Solids (g/m ² month)	3.22	2.26	2.95	3.90	3.44
Volume of Liquid in the Gauge (ml)	200	200	200	200	200

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.

J.Graham, Mat.File, File.



Approved Signatory: S. Krishnamoorthy
 Date: 7.9.18 Serial No. 171641
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NATA Accredited Laboratory
Number: 9968



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No: 250 / 18

PROJECT: Gravimetric Dust Monitoring at Maroota for September 2018

REQUEST No.:80614

TEST PROCEDURE: AS 3580.10.1 – 2003 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	211089	211090	211091	211092	211093
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	3.09.18	to	2.10.18	

TEST RESULTS:

Insoluble Solids (g/m ² month)	3.86	2.86	7.04	3.84	3.49
Ash (g/m ² month)	1.64	1.44	2.86	1.64	1.83
Combustible Matter (g/m ² month)	2.22	1.42	4.17	2.20	1.66
Soluble Matter (g/m ² month)	2.18	1.41	3.56	1.65	1.93
Total Solids (g/m ² month)	6.04	4.27	10.60	5.49	5.42
Volume of Liquid in the Gauge (ml)	800	800	900	750	900

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- Site No: 3 Nut lodged in Funnel.

J.Graham, Mat.File, File.



Approved Signatory

S.Krishnamoorthy

S.Krishnamoorthy

Date

9.10.18

Serial No.

172620

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9958



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No.: 250 / 18

PROJECT: Gravimetric Dust Monitoring at Maroota for October 2018

REQUEST No.: 81217

TEST PROCEDURE:

AS 3580.10.1 – 2003 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	212616	212617	212618	212619	212620
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	2.10.18	to		2.11.18

TEST RESULTS:

Insoluble Solids (g/m ² month):	1.68	1.90	2.87	1.47	2.09
Ash (g/m ² month):	1.10	1.07	1.78	0.82	1.22
Combustible Matter (g/m ² month):	0.58	0.82	1.09	0.65	0.88
Soluble Matter (g/m ² month):	0.33	0.44	0.52	0.63	0.06
Total Solids (g/m ² month):	2.01	2.34	3.40	2.10	2.15
Volume of Liquid in the Gauge (ml):	4000	4000	4000	4000	3800

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- Site No. 2 - 'Paddock Slashing' as in the Client's COC Form.

J.Graham, Mat.File, File.



Approved Signatory S. Krishnamoorthy
Date 13.11.18. Serial No. 173898
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NATA Accredited Laboratory

Number: 9968



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No.: 250 / 18

PROJECT: Gravimetric Dust Monitoring at Maroota for November 2018

REQUEST No.: 81781

TEST PROCEDURE:

AS 3580.10.1 – 2003 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	214310	214311	214312	214313	214314
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	2.11.18	to	30.11.18	

TEST RESULTS:

Insoluble Solids (g/m ² month):	3.68	4.27	5.59	3.83	4.92
Ash (g/m ² month):	2.43	2.57	3.87	2.56	3.13
Combustible Matter (g/m ² month):	1.25	1.69	1.72	1.27	1.78
Soluble Matter (g/m ² month):	1.84	2.42	3.18	2.47	5.78
Total Solids (g/m ² month):	5.52	6.68	8.76	6.30	10.70
Volume of Liquid in the Gauge (ml):	1500	1500	1500	1700	1700

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- Dust Storm on 22.11.18

J.Graham, Mat.File, File.



S.Krishnamoorthy

Approved Signatory *[Signature]*

Date *6/12/18* Serial No. *174808*

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Number: 9968



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No.: 250 / 19

PROJECT: Gravimetric Dust Monitoring at Maroota for December 2018

REQUEST No.: 82240

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	215448	215449	215450	215451	215452
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	1.12.18	to	11.01.19	

TEST RESULTS:

Insoluble Solids (g/m ² month):	3.18	3.03	7.84	3.65	3.71
Ash (g/m ² month):	2.13	1.99	6.03	2.61	2.48
Combustible Matter (g/m ² month):	1.05	1.04	1.82	1.03	1.23
Soluble Matter (g/m ² month):	0.44	0.77	1.87	0.45	0.53
Total Solids (g/m ² month):	3.62	3.80	9.71	4.10	4.24
Volume of Liquid in the Gauge (ml):	1800	2000	1800	2000	1800

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- The samples collected were not covering the period as stipulated in the test method. Calculations based on 41 days of exposure

J.Graham, Mat.File, File.



Approved Signatory S.Krishnamoorthy
Date 22.1.19 Serial No. 176198

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No.: 250 / 19

PROJECT: Gravimetric Dust Monitoring at Maroota for January 2019

REQUEST No.:82563

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air

Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	216233	216234	216235	216236	216237
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	11.01.19	to	1.02.19	

TEST RESULTS:

Insoluble Solids (g/m ² month):	1.92	5.12	4.28	2.65	2.29
Ash (g/m ² month):	1.69	2.61	3.11	2.33	2.06
Combustible Matter (g/m ² month):	0.23	2.51	1.17	0.32	0.24
Soluble Matter (g/m ² month):	2.96	5.56	3.33	2.02	3.38
Total Solids (g/m ² month):	4.87	10.68	7.61	4.66	5.67
Volume of Liquid in the Gauge (ml):	1100	1000	1200	1100	1200

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- The samples collected were not covering the period as stipulated in the test method. Calculations based on 21 days of exposure

J.Graham, Mat.File, File.



Approved Signatory S.Krishnamoorthy

Date 11.2.19 Serial No. 176979

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No.: 250 / 19

PROJECT: Gravimetric Dust Monitoring at Maroota for February 2019

REQUEST No.:82986

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	217256	217257	217258	217259	217260
Site Location Number:	1	2	3	4	5
Sample Description:			Dust		
Sampling Period:	From	1.02.19	to	1.03.19	

TEST RESULTS:

Insoluble Solids (g/m ² month):	3.80	3.74	4.19	3.33	3.39
Ash (g/m ² month):	2.21	2.32	2.44	2.03	2.21
Combustible Matter (g/m ² month):	1.59	1.43	1.75	1.30	1.18
Soluble Matter (g/m ² month):	3.35	2.86	3.54	2.59	1.80
Total Solids (g/m ² month):	7.16	6.60	7.72	5.92	5.19
Volume of Liquid in the Gauge (ml):	1100	900	900	1500	1300

Notes:

- Refer to attached graphs.
- Samples submitted by the Client.
- Nearby paddock Site No.5 recently slashed.

J.Graham, Mat.File, File.



Approved Signatory S.Krishnamoorthy
Date 6.3.19. Serial No. 177850

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



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FILE No.: 250 / 19

TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

PROJECT: Gravimetric Dust Monitoring at Maroota for March 2019

REQUEST No.: 83513

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	218653	218654	218655	218656	218657
Site Location Number:	1	2	3	4	5
Sample Description:	Dust				
Sampling Period:	From	01.03.2019	to	01.04.2019	

TEST RESULTS:

Insoluble Solids (g/m ² month):	1.99	3.05	5.00	1.52	2.33
Ash (g/m ² month):	1.02	1.63	2.90	0.73	1.42
Combustible Matter (g/m ² month):	0.97	1.43	2.10	0.79	0.92
Soluble Matter (g/m ² month):	0.64	1.32	0.75	0.78	0.65
Total Solids (g/m ² month):	2.63	4.38	5.74	2.30	2.98
Volume of Liquid in the Gauge (ml):	3400	3000	3100	3100	3300

Notes:

- As in the Client's COC: Site No.1 - Grass recently slashed nearby; Site Nos. 2,3&5 - Rain during past month; and Site No. 4 - Neighbour recently mowed grass.
- Refer to attached graphs.
- Samples submitted by the Client.

J.Graham, Mat.File, File.



Approved Signatory S. Krishnamoorthy
Date 30.4.19. Serial No. 179650

S.Krishnamoorthy

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



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FILE No.: 250 / 19

TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

PROJECT: Gravimetric Dust Monitoring at Maroota for April 2019

REQUEST No.: 83912

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air

Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	219641	219642	219643	219644	219645
Site Location Number:	1	2	3	4	5
Sample Description:	Dust				
Sampling Period:	From	01.04.2019	to	01.05.2019	

TEST RESULTS:

Insoluble Solids (g/m ² month):	1.14	0.67	1.06	0.99	0.65
Ash (g/m ² month):	0.65	0.56	0.77	0.76	0.59
Combustible Matter (g/m ² month):	0.49	0.11	0.29	0.23	0.06
Soluble Matter (g/m ² month):	1.04	1.58	1.29	0.64	0.93
Total Solids (g/m ² month):	2.18	2.26	2.35	1.63	1.58
Volume of Liquid in the Gauge (ml):	500	500	500	500	500

Notes:

- As in the Client's COC: Site Nos. 3 & 4 – 'Paddock recently slashed'.
- Refer to attached graphs.
- Samples submitted by the Client.

J.Graham, Mat.File, File.

S.Krishnamoorthy



Approved Signatory: *S.Krishnamoorthy*

Date: 23.5.19 Serial No. 180582

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



**Boral Construction Materials
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FILE No.: 250 / 19

TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

PROJECT: Gravimetric Dust Monitoring at Maroota for May 2019

REQUEST No.: 84373

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air

Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	220721	220722	220723	220724	220725
Site Location Number:	1	2	3	4	5
Sample Description:	Dust				
Sampling Period:	From	01.05.2019	to	31.05.2019	

TEST RESULTS:

Insoluble Solids (g/m ² month):	0.56	0.67	0.55	0.73	0.96
Ash (g/m ² month):	0.38	0.43	0.37	0.36	0.69
Combustible Matter (g/m ² month):	0.18	0.24	0.17	0.37	0.27
Soluble Matter (g/m ² month):	1.03	1.29	0.25	0.90	0.84
Total Solids (g/m ² month):	1.59	1.96	0.80	1.63	1.80
Volume of Liquid in the Gauge (ml):	150	200	200	150	200

Notes:

- As in the Client's COC: Site Nos. 2 & 4 - 'Area recently slashed/mowed'.
- Refer to attached graphs.
- Samples submitted by the Client.

J.Graham, Mat.File, File.



Approved Signatory

S. Krishna

S.Krishnamoorthy

Date

20.6.19

Serial No.

181208

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9968



**Boral Construction Materials
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TEST REPORT

CLIENT: P.F. FORMATION
1774 Wisemans Ferry Road Maroota NSW 2756

FILE No.: 250 / 19

PROJECT: Gravimetric Dust Monitoring at Maroota for June 2019

REQUEST No.: 84812

TEST PROCEDURE:

AS 3580.10.1 – Methods for Sampling and Analysis of Ambient Air
Method 10.1 – Determination of Particulate Matter - Deposited Matter – Gravimetric Method

Lab. Sample Number:	221820	221821	221822	221823	221824
Site Location Number:	1	2	3	4	5
Sample Description:	Dust				
Sampling Period:	From	31.05.2019	to	01.07.2019	

TEST RESULTS:

Insoluble Solids (g/m ² month):	1.93	1.85	2.96	1.90	2.59
Ash (g/m ² month):	0.42	0.40	1.09	0.52	1.05
Combustible Matter (g/m ² month):	1.52	1.45	1.87	1.38	1.53
Soluble Matter (g/m ² month):	0.59	0.49	0.48	0.57	0.62
Total Solids (g/m ² month):	2.53	2.34	3.44	2.46	3.20
Volume of Liquid in the Gauge (ml):	900	900	1000	900	1000

Notes:

- Test results relate only to the samples tested.
- As in the Client's COC: 'Grass slashed around area.'
- Refer to attached graphs.
- Samples submitted by the Client.

J.Graham, Mat.File, File.



Approved Signatory S. Krishna S.Krishnamoorthy

Date 18.7.19 Serial No. CHEM84812.SK.1

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NATA Accredited Laboratory

Number: 9968

ATTACHMENT 12

SURFACE WATER MONITORING RESULTS



**Boral Construction Materials
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FILE No.: 250/18

REQUEST No.: 80079

Test Report

CLIENT: P.F. Formation

ADDRESS: 1774 Wisemans Ferry Road MAROOTA NSW 2756

PROJECT: Testing of Water from P.F. Formation.

TEST PROCEDURE: APHA 4500 H⁺B - pH Value - Electrometric Method
APHA 2130 B - Turbidity - Nephelometric Method
APHA 5520 C - Oil & Grease - Partition-Infrared Method
APHA 2540 C - Total Dissolved Solids Dried at 180°C
APHA 2540 D - Total Suspended Solids Dried at 103-105 °C
APHA 2510 B - Conductivity - Laboratory Method

Laboratory Sample No.: 209533
Date Sampled: 01/09/18
Date Received: 03/09/18
Sample Description: Water – Hitchcock Rd Little Cattai Creek
- Trig Pit – 12:15pm
Field No.: 3

TEST RESULTS

pH ^{*1}	4.4
Turbidity (NTU)	1.1
Oil & Grease (mg/L) ^{*2}	< 0.1
Total Dissolved Solids (mg/L)	95
Total Suspended Solid (mg/L)	6.5
Conductivity (µS/cm)	187

Sample submitted by the Client.

NOTE:

*1 Test has not met the sample specified holding time.

*2 Solvent used in the determination of Solvent Extractable Matter for Oil & Grease analysis: Polychlorotrifluoroethylene S316.

J. Graham, Q.C. File, Mat. File, File.



Approved Signatory

Nanthini Selvadurai

Date 11-09-18 Serial No. 171767

Accredited for compliance with ISO/IEC 17025

NATA Accredited Laboratory

Number: 9868

CERTIFICATE OF ANALYSIS

Work Order : ES1836584 Client : PF FORMATION Contact : Dino Parisotto Address : 1 Patrica Fay Drive Maroota 2756 Telephone : 0422 334 102 Project : --- Order number : --- C-O-C number : --- Sampler : --- Site : --- Quote number : --- No. of samples received : 4 No. of samples analysed : 4	Page : 1 of 2 Laboratory : Environmental Division Sydney Contact : Customer Services ES Address : 277-289 Woodpark Road Smithfield NSW Australia 2164 Telephone : +61-2-8784 8555 Date Samples Received : 05-Dec-2018 17:35 Date Analysis Commenced : 06-Dec-2018 Issue Date : 13-Dec-2018 14:28
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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

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



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

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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		Lot 198	Hitchcock Rd Crk	Pit 5 Crk	Pit 4 Crk	----
		Client sampling date / time		05-Dec-2018 09:20	05-Dec-2018 10:30	05-Dec-2018 11:00	05-Dec-2018 11:45	----
Compound	CAS Number	LOR	Unit	ES1836584-001	ES1836584-002	ES1836584-003	ES1836584-004	-----
				Result	Result	Result	Result	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	5.35	4.40	6.77	6.78	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	291	236	186	278	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	<5	<5	24	30	----
EA045: Turbidity								
Turbidity	----	0.1	NTU	1.5	0.3	42.7	91.1	----
EP020: Oil and Grease (O&G)								
Oil & Grease	----	5	mg/L	<5	<5	<5	<5	----

CERTIFICATE OF ANALYSIS

Work Order : ES1911357 Client : PF FORMATION Contact : Josh Address : 1 Patrica Fay Drive Maroota 2756 Telephone : --- Project : Surface Water Testing Order number : --- C-O-C number : 1412 Sampler : Melissa Mass Site : --- Quote number : --- No. of samples received : 4 No. of samples analysed : 4	Page : 1 of 2 Laboratory : Environmental Division Sydney Contact : Customer Services ES Address : 277-289 Woodpark Road Smithfield NSW Australia 2164 Telephone : +61-2-8784 8555 Date Samples Received : 11-Apr-2019 16:50 Date Analysis Commenced : 11-Apr-2019 Issue Date : 28-May-2019 09:31	  <small>Accreditation No. 825 Accredited for compliance with ISO/IEC 17025 - Testing</small>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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

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

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

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LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		Lot 198	Hitchcock Rd	Pit 5	Pit 4	---
		Client sampling date / time		11-Apr-2019 00:00	11-Apr-2019 00:00	11-Apr-2019 00:00	11-Apr-2019 00:00	---
Compound	CAS Number	LOR	Unit	ES1911357-001	ES1911357-002	ES1911357-003	ES1911357-004	-----
				Result	Result	Result	Result	---
EA005P: pH by PC Titrator								
pH Value	---	0.01	pH Unit	6.72	5.22	6.60	7.09	---
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	---	1	µS/cm	225	241	136	287	---
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	---	5	mg/L	8	5	175	8	---
EA045: Turbidity								
Turbidity	---	0.1	NTU	10.5	0.3	259	12.4	---
EP020: Oil and Grease (O&G)								
Oil & Grease	---	5	mg/L	<5	<5	<5	<5	---