5 October 2023

Fairfield City Council

Annual Environmental Monitoring Report 2022/2023

Fairfield City Council Sustainable Resource Centre

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Annual Environmental Monitoring Report 2022/2023

Fairfield City Council Sustainable Resource Centre

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WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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1 Introduction

WSP Australia Pty Ltd (WSP Golder) presents this report summarising the results of environmental monitoring undertaken at the Fairfield City Council Sustainable Resource Centre (the 'Site') located in Hassall Street, Wetherill Park for the 2022/2023 reporting year. WSP Golder was commissioned to carry out this work by Fairfield City Council (Council) following our proposal P17623136-003-P-Rev0, dated 3rd October 2013.

The site locality and site plan are presented in **Figure 1** (Appendix A). Works were carried out to perform the dust monitoring required by Environment Protection licence (EPL) No. 5713 and meet Council's internal requirements for the monitoring of groundwater and surface water at the Site.

2 Scope of Work

The environmental monitoring was carried out as follows:

- Monthly monitoring of dust deposition at five separate locations (locations DDG1 to DDG5 inclusive) with analysis comprising total insoluble solids, combustible matter and ash;
- Quarterly monitoring of 2 surface water (locations SW1 and SW2) and 3 groundwater conditions (locations GW1, GW3 and GW4); and
- Preparation of this annual report summarising the works performed and documenting the data quality assessment of the laboratory analytical results.

3 Methodology

3.1 Dust Monitoring

The monthly dust monitoring was conducted for 12 consecutive months between the period October 2022 to September 2023. Five dust monitoring locations were monitored for insoluble solids, combustible matter and ash in general accordance with AS/NZS 3580.10.1: 2016 Methods for sampling and analysis of ambient air - Determination of particulate matter – Deposited matter – Gravimetric method. Two litre dust deposit gauge bottles were collected from each location and replaced by clean two litre dust gauge bottles (containing copper sulfate solution). The bottles were labelled with the job number, sample location, date of drop off/collection. The amber bottles were transported to Australian Laboratory Services (ALS) under chain of custody procedures for analysis.

Note that AS/NZS 3580.10.1 (2016) states that the dust exposure period for monitoring programs should be 30±2 days. The exposure period for dust samples collected in November 2022 was 37 days and 24 days for December 2022. However, results are within historical range and therefore these exceedances are not considered to have compromised the data collected.

3.2 Groundwater Monitoring

Groundwater monitoring was conducted on a quarterly basis on 14th September and 12th December 2022 and on 20th March and 9th June 2023.

Prior to groundwater sampling, the depth to groundwater was measured with an electronic water level gauge. Sampling was conducted using a low-flow peristaltic pump at the locations and purging continued until indicator parameters (pH, redox potential, electrical conductivity (EC), dissolved oxygen (DO) and temperature) had stabilised. Low-flow sampling is considered best-practice as the reduced flow rate (~0.1 to 0.3 L/min) minimises the loss of volatiles from the sample matrix.

Groundwater samples were collected in sample containers provided by the laboratory.

3.3 Surface Water Monitoring

Surface water monitoring was conducted on the same dates as the groundwater monitoring. Samples were collected directly from the water body into new sample containers provided by the laboratory.

During the sampling process, indicator parameters (pH, temperature, EC, redox potential and DO) were measured by placing the probe directly into the surface water body.

3.4 Analytical Schedule

Primary samples were submitted to Australian Laboratory Services (ALS) for chemical analyses of analytes listed in **Tables 2** and **3** in Appendix B. ALS is accredited by the National Association of Testing Authorities, Australia (NATA) for the analyses performed. The analytical methods employed are identified in the laboratory certificates (Appendix D).

The sampling procedures were in general accordance with *AS/NZS 5667.1: 1998 (R2016) Water Quality - Sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples* and *AS/NZS 5667.10:1998 (R2016) Water Quality - Sampling Part 10: Guidance on sampling of waste waters*.

3.5 Assessment Criteria

The results of the field monitoring and laboratory analysis were interpreted by comparison with criteria from the following sources:

- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality,* Australian and New Zealand Governments, 2018 (ANZG 2018). Trigger values for toxicants in freshwater (at the 95% protection of species level) were used to assess inorganic and organic compounds in groundwater and surface water. ANZG 2018 refers to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand (ANZECC 2000) for physical and chemical stressors. The default trigger values for physical and chemical stressors for slightly disturbed ecosystems (lowland rivers) have been used to assess pH, EC and nitrate and nitrite in the groundwater and surface water; and
- *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*, NSW Environment Protection Authority, 2016 (EPA 2016). Deposited dust results were compared to the impact assessment criterion of 4 g/m^2/month for insoluble solids.

Note as there are no specific groundwater quality guidelines outlined in the site EPL No. 5713 therefore, water samples were compared to ANZG (2018) guidelines 95% protection of freshwater aquatic ecosystems trigger values. These values are relevant for receiving waters and are used as screening criteria in the absence of any specific ground and surface water quality guidelines.

3.6 Quality Assurance / Quality Control (QA/QC)

3.6.1 Data Quality Objectives (DQOs)

The DQO's for this investigation were as follows:

- Accuracy to be in the range specified by ALS and SGS for spike recovery;
- Reproducibility to be within the laboratory control limits as specified by ALS and SGS for internal laboratory duplicates;

- Method blanks below the laboratory analysis limit of reporting (LOR); and
- LORs should be a maximum of 1/5, and preferably 1/10 of the assessment criteria concentration.

3.6.2 Field QA/QC

The fieldwork for this investigation was performed in accordance with WSP Golder Standard Quality Procedures and by qualified field staff. This included calibration of field instruments prior to use, collection of samples in new containers supplied by the laboratory, preservation of samples in ice chests and transport of samples to the contract laboratories under chain of custody documentation.

The internal NATA accredited laboratory QA/QC results are presented within the laboratory certificates (Appendix D) and are considered acceptable based on the control sample results. A more detailed evaluation of the laboratory QA/QC is provided in Appendix C.

3.6.3 Data Validation

The assessment of both field and laboratory QA/QC has been carried out and is considered to be acceptable for environmental interpretative use. Laboratory QA/QC is presented within Appendix C and Appendix D.

4 Results

4.1 Rainfall

A summary of the monthly rainfall totals is presented below in Table A. Monthly rainfall data was obtained from the Bureau of Meteorology Horsley Park weather station. The long-term averages were obtained from the nearby Prospect Reservoir weather station which has recorded rainfall data since 1887. Below average total rainfall was reported for the entire twelve-month period. November and December 2022, June, July and September 2023 recorded average rainfall. March and August 2023 recorded above average rainfall. The remaining months recorded below average rainfall.

Table A: Rainfall Data

Month	Horsley Park rainfall 2022-2023 (mm)	Long term average rainfall for Prospect Reservoir (mm)
October 2022	150.8	187.0
November 2022	40.8	37.0
December 2022	15.4	14.0
January 2023	97.6	133.0
February 2023	91.0	96.0
March 2023	46.6	39.0
April 2023	62.6	76.0
May 2023	18.0	23.0
June 2023	14.6	13.0
July 2023	10.8	10.0
August 2023	66.8	43.0
September 2023	14.0	9
Rainfall	**620.4**	**680.0**

4.2 Field Results

4.2.1 Groundwater Conditions

Groundwater field parameter results are presented in **Table 1** (Appendix B) and are discussed below. Note that the final stabilised parameters are presented below.

Water Levels: The static water levels ranged at each location as follows:

- GW1 – 2.22 metres below top of casing (mBTOC) (December 2022) to 3.26 mBTOC (June 2023).
- GW3 – between 1.34 mBTOC (March 2023) to 1.73 mBTOC (June 2023).
- GW4 – between 2.90 mBTOC (December 2022) to 3.01 mBTOC (June 2023).

pH: The field pH values ranged at each location as follows:

- GW1 – 6.56 (March 2023) to 6.89 (December 2022).
- GW3 – 6.78 (March 2023) to 8.47 (June 2023).
- GW4 – 6.47 (June 2023) to 6.70 (March 2023).

The pH result in groundwater were within the ANZG (2018) criterion range of 6.5 to 8.0 pH units for the monitoring rounds with the exception of GW3 in June 2023. The pH results indicate that the groundwater is generally neutral, however pH levels at GW3 in June 2023 indicate neutral to slightly alkaline waters.

Temperature: The field temperature ranges reported for each location are as follows:

- GW1 – 18.6˚C (June 2023) to 20.1˚C (December 2022).
- GW3 – 16.6˚C (September 2022) to 18.9˚C (December 2023).
- GW4 – 18.7˚C (March 2023) to 19.7˚C (December 2022).

Temperatures can be variable, however, generally relate to the ambient air temperatures at the time of monitoring.

Electrical Conductivity: The electrical conductivity ranges reported for each location are as follows:

- GW1 – 451 µS/cm (December 2022) and 1,140 µS/cm (September 2022).
- GW3 – 20 µS/cm (June 2023) and 3,989 µS/cm (September 2022).
- GW4 – 560 µS/cm (March 2023) and 8,621 µS/cm (September 2022).

Electrical conductivities at GW3 and GW4 during September 2022, December 2022 and June 2023 monitoring rounds were outside the recommended ANZG 2018 criterion range of 125 to 2,200 µS/cm. Waters were generally brackish (GW3) to saline (GW4).

Redox Potential: The field redox ranges reported for each location are as follows:

- GW1 – ranged between -155.3 mV (June 2023) and -32.0 mV (March 2023).
- GW3 – ranged between -132.0 mV March 2023) and 221.2 mV (September 2022).
- GW4 – ranged between 72.1 mV (September 2022) and 187 mV (June 2023).

Redox potential generally indicated a mild reducing environment during the monitoring period.

Dissolved Oxygen: The field DO concentration ranges reported for each location was as follows:

- GW1 – 0.78 mg/L (September 2022) to 1.03 mg/L (December 2022).
- GW3 – 0.91 mg/L (March 2023) to 3.49 mg/L (September 2022).
- GW4 – 0.16 mg/L (June 2023) to 3.80 mg/L (September 2022).

Dissolved oxygen values indicate a generally oxygen deficient environment.

4.2.2 Surface Water Conditions

Surface water field parameter results are presented in **Table 1** (Appendix B) and are discussed below. Surface water sample location SW1 is considered to be up-gradient from the site whilst location SW2 is downgradient. Water quality parameters were taken by directly placing the probe into the water body.

pH: The field pH values varied between locations and sampling events. Those values ranged from pH 6.63 (June 2023) to pH 7.82 (December 2022) at SW1 and from pH 4.82 (June 2023) to pH 7.03 (December 2022) at SW2 indicating that the water is generally neutral at SW1 and neutral to slightly acidic at SW2. The pH values were within the recommended ANZG 2018 pH criterion range (6.5 – 8.0), except for SW2 in June 2023.

Temperature: The field temperature values ranged from 15.8˚C (September 2022) to 19.9˚C (March 2023) at SW1 and from 16.0˚C (September 2022) to 19.9˚C (March 2023) at SW2. Temperatures reported are variable, however, they are generally reflective of ambient temperature at the time of sampling.

Electrical Conductivity: The field EC values ranged between 411 µS/cm (September 2023) and 1420 µS/cm (December 2022) at SW1 and from 539 µS/cm (June 2023) and 989 µS/cm (March 2023) at SW2. Surface waters were generally fresh to slightly brackish. EC values were within the recommended ANZG 2018 criterion range of 125 to 2,200 µS/cm.

Redox Potential: The field redox values ranged from -95.2 mV (June 2023) to 129 mV (March 2023) at SW1 and from -107 mV (September 2022) to 233 mV (March 2023) at SW2. Redox potential generally indicated a reducing environment during the monitoring period.

Dissolved Oxygen: The field DO concentrations ranged from 2.34 mg/L (December 2022) to 3.67 mg/L (March 2023) at SW1 and from 1.52 mg/L (June 2023) to 5.60 mg/L (March 2023) at SW2. Dissolved oxygen values indicate a generally oxygen deficient environment.

4.3 Analytical Laboratory Results

Laboratory analytical results are summarised in **Tables 2**, **3** and **4** in Appendix B and a factual discussion of the results is presented in the following sections. Laboratory certificates are presented in Appendix D.

4.3.1 Dust

The monthly dust monitoring was conducted for 12 consecutive months between the period October 2022 to September 2023 generally in accordance with AS/NZS 3580.10.1: 2016.

Insoluble matter: Insoluble solids ranged from 0.1 g/m^2/month at DDG1 in November 2022 and January 2023 to 6.1 g/m^2/month at DDG4 in December 2022. Exceedances of the adopted criterion (4.0 g/m^2/month) were reported for the monitoring period, including:

- DDG2 – 4.4 g/m^2/month in December 2022; and
- DDG4 – 6.1 g/m^2/month in December 2022, respectively.

Combustible matter: Combustible matter ranged from <0.1 g/m^2/month (LOR) at DDG1 in November 2022 and January 2023, at DDG2 in June and July 2023, at DDG3 in June 2023 and DDG4 in June 2023 to 3.3 g/m^2/month at DDG4 in December 2022. No criterion is available for combustible matter.

Ash: Ash content ranged from 0.1 g/m^2/month at DDG1 in November 2022 and January 2023 to 3.3 g/m^2/month at DDG2 in December 2022 and March 2023. No criterion is available for ash content.

Combustible matter and ash content were not analysed for September 2023 due to laboratory process error. The required aliquot needed to calculate these results was not taken for sample "DDG4", therefore only receive total insoluble matter results were received for this sample.

4.3.2 Groundwater

Heavy Metals: Manganese results at monitoring locations GW5 in June 2023 and GW1 in September 2022, December 2022 and June 2023 exceeded the adopted assessment criterion (1.9 mg/L) for dissolved and total manganese. These values remain within the historical range of reported results.

Total iron concentrations ranged from <0.05 mg/L (LOR) at the monitoring locations in March 2023 to 13.8 mg/L at GW3 in June 2023. Dissolved iron concentrations were <0.05 mg/L (LOR) at GW1, GW3 and GW4 for the monitoring rounds.

Nitrate, Nitrite & Ammonia: Ammonia criterion exceedances were reported at in September 2022 at GW1 and at GW3 in the September and December 2022. The other locations reported concentrations above the LOR but were below the adopted assessment criterion (0.9 mg/L).

Nitrate plus nitrite criterion exceedances were reported at GW1 in March 2023, GW4 in March 2023, GW3 in September 2022, March 2023 and June 2023. These values are within the historical range of reported results.

Total Organic Carbon (TOC): TOC concentrations ranged from 2 mg/L at GW1, GW3 and GW4 (March 2023) to 124 mg/L at GW3 (December 2022).

Volatile Organic Compounds (VOCs): The concentrations for VOCs were reported to be below the respective LORs and therefore no exceedances of the adopted assessment criteria were reported.

4.3.3 Surface Water

Heavy Metals: There were no exceedances of the adopted site criteria for manganese of 1.9 mg/L (ANZG 2018).

Total iron ranged from 0.7 mg/L at SW1 (June 2023) to 16.5 mg/L at SW2 (June 2023). Dissolved iron ranged from 0.07 mg/L at SW1 (March 2023) to 16.6 mg/L at SW2 (June 2023). Dissolved iron concentrations at SW2 in March and June 2023 exceed historical ranges, however, no adopted exceedance criteria exist.

Nitrate, Nitrite & Ammonia:

Ammonia ranged from 0.09 mg/L (December 2022) to 8.28 mg/L (SW1 March 2023). No exceedances of the adopted ammonia criteria (0.9 mg/L) were reported in the monitoring period except for SW1 in March 2023. However, the results remain within historical range.

The nitrate concentrations exceed the LOR (0.01 mg/L) with the exception of SW2 in September 2022, however, no adopted exceedance criteria exist.

The SW1 and SW2 monitoring rounds exceeded the adopted nitrate plus nitrite criterion except SW2 in September 2022. Exceedances at SW2 (December 2022, March 2023, June 2023) and SW1 (September 2022) recorded historical high concentrations ranging from 0.54-2.25 mg/L.

Total Organic Carbon (TOC): TOC concentrations ranged from 10 mg/L for SW1 (June 2023) and SW2 (March 2022) to 1940 mg/L for SW2 (June 2023).

Volatile Organic Compounds (VOCs): The concentrations for VOCs were reported to be below the respective LORs and the ANZG (2018) freshwater 95% protection adopted criteria.

5 Conclusions

WSP Golder was requested to undertake monthly dust sampling and quarterly groundwater and surface water sampling at the Fairfield Waste and Recycling Depot for the 2022/2023 reporting year by Fairfield City Council. It is noted that EPL 5713 requires monitoring of deposited dust. It is understood that the sampling of groundwater and surface water is to ensure potential environmental risks from the former landfill are monitored appropriately. Exceedances of the adopted criteria are summarised as follows:

- Dust exceedances of the adopted insoluble matter assessment criteria (4.0 g/m^2/month) occurred at:
  - DDG2 – 4.4 g/m^2/month in December 2022; and
  - DDG4 – 6.1 g/m^2/month in December 2022, respectively.

- Groundwater
  - Ammonia criterion exceedances were reported at in September 2022 at GW1 and at GW3 in the September and December 2022. The other locations reported concentrations above the LOR but were below the adopted assessment criterion (0.9 mg/L).
  - Nitrate plus nitrite criterion exceedances were reported at GW1 in March 2023, GW4 in March 2023, GW3 in September 2022, March 2023 and June 2023. These values are within the historical range of reported results.
  - Manganese results at monitoring locations GW5 in June 2023 and GW1 in September 2022, December 2022 and June 2023 exceeded the adopted assessment criterion (1.9 mg/L) for dissolved and total manganese. These values remain within the historical range of reported results.
  - Electrical conductivity was reported as being marginally outside the acceptable range of 125 to 2,200 µS/cm at locations GW3 and GW4 in September 2022, December 2022, June 2023.

- Surface Water
  - No exceedances of the adopted ammonia criterion were reported in the monitoring period with the exception of SW1 in March 2023, however, results remain within historical range.
  - The SW1 and SW2 monitoring rounds exceeded the adopted nitrate plus nitrite criterion except SW2 in September 2022. Exceedances at SW2 (December 2022, March 2023, June 2023) and SW1 (September 2022) recorded historical high concentrations.

It is considered that the monitoring works carried out during the 2022/2023 monitoring period were in accordance with the requirements of Environment Protection licence (EPL) No. 5713 and meet Council's internal requirements for the monitoring of groundwater and surface water at the Site.

6 Important Information

Your attention is drawn to the document titled - “Important Information Relating to this Report”, which is included in Appendix E of this report. The statements presented in that document are intended to inform a reader of the report about its proper use. There are important limitations as to who can use the report and how it can be used. It is important that a reader of the report understands and has realistic expectations about those matters. The Important Information document does not alter the obligations WSP Golder has under the contract between it and its client.

7 References

ANZECC 2000 — *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 2000.

ANZG 2018 — *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Governments, 2018.

AS/NZS 3580.10.1 — *AS/NZS 3580.10.1: 2016 Methods for sampling and analysis of ambient air Method 10.1: Determination of particulate matter – Deposited matter – Gravimetric method*, Standards Australia, 2016.

AS/NZS 5667.1 — *AS/NZS 5667.1: 1998 (R2016) Water Quality - Sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*, Standards Australia, 1998.

AS/NZS 5667.10 — *AS/NZS 5667.10:1998 (R2016) Water Quality - Sampling Part 10: Guidance on sampling of waste waters*, Standards Australia, 1998.

EPA 2016 — *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, Environment Protection Authority, 2016.

NIWAR 2013 — *Updating nitrate toxicity effects on freshwater aquatic species*, National Institute of Water & Atmospheric Research Ltd, January 2013.

Appendix A

Figure

306,800 307,000 307,200 307,400 307,600

6,254,200 6,254,000 6,253,800 6,253,600

QUARRY RD
THE BLACK L
LPT TRANSITWAY
HYLAND RD
DAVIS RD
WIDEMERE RD
CANAL ST
HASSALL ST

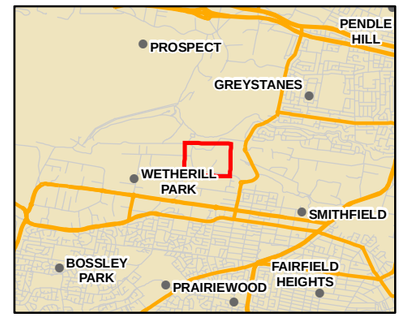
SW1
GW1
DDG1
DDG2
SW2
GW3
GW4
DDG3
DDG4
DDG5

N

ENVIRONMENTAL MONITORING WETHERILL PARK

FAIRFIELD CITY COUNCIL

ENVIRONMENTAL MONITORING LOCATIONS



LEGEND

- Surface Water Monitoring
- Dust Monitors
- Ground Water Monitoring

NOTES

Environmental monitoring locations provided by client.

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2. Base map data copyright MapInfo Australia Pty Ltd

0 15 30 60 90 120 150 metres

SCALE (at A3) 1:3,000

Coordinate System: GDA 1994 MGA Zone 56

PROJECT: **117623088**
DATE: **1/09/2019**
DRAWN: **KS**
CHECKED: **IW**

FIGURE 1

Golder Associates

File Location: J:\env\2011\117623088_FCC_Enviro Monitoring_Wetherill Park\Technical Doc\GIS\Project\117623088_F0001_Rev1.mxd

Appendix B

Summary Tables

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters

Fairfield City Council

Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
Ground Water								
GW1	16/09/11	2.05	0.00	2500	6.84	-193.0	6.0	21.0
GW1	13/01/12	2.83	2.12	1213	7.43	-129.0	70.0	21.7
GW1	22/03/12	1.71	1.12	1921	6.75	-135.0	64.0	20.4
GW1	22/06/12	2.01	1.31	1973	6.83	-93.0	106.0	17.3
GW1	18/09/12	3.30	-	-	-	-	-	-
GW1	20/12/12	3.50	2.98	2147	7.05	-122.0	77.0	24.9
GW1	20/03/13	2.72	0.32	1398	6.92	-322.0	-123.0	24.3
GW1	17/06/13	3.10	0.28	1966	6.84	-154.0	45.0	20.8
GW1	18/09/13	3.35	0.06	1429	6.97	-150.0	49.0	18.7
GW1	16/12/13	3.35	0.67	1858	7.20	-197.0	2.0	22.3
GW1	14/03/14	3.53	0.72	1919	6.76	-152.1	46.9	22.5
GW1	16/06/14	3.39	2.71	1927	6.71	-138.0	61.0	20.9
GW1	26/09/14	3.50	0.62	2800	7.05	-123.3	75.7	20.4
GW1	16/12/14	1.21	0.39	1432	6.86	-154.6	44.4	21.0
GW1	16/03/15	3.16	0.16	1661	6.84	-215.0	-16.0	21.8
GW1	15/06/15	2.76	0.21	1914	7.04	-215.6	-16.6	19.5
GW1	14/10/15	3.21	1.02	1529	6.95	-63.0	136.0	20.3
GW1	11/12/15	3.23	0.23	1719	7.04	-173.7	25.3	23.7
GW1	29/03/16	3.28	1.06	1641	6.64	-236.0	-37.0	20.6
GW1	15/06/16	2.16	0.20	1287	7.05	-86.6	112.4	18.8
GW1	15/09/16	2.25	0.19	1532	7.11	-55.4	143.6	18.6
GW1	15/12/16	3.64	0.09	1493	6.66	-174.6	24.4	18.6
GW1	15/03/17	0.75	0.36	1747	6.97	-162.2	36.8	21.2
GW1	15/06/17	1.05	0.14	1987	6.75	-151.8	47.2	17.0
GW1	15/09/17	3.56	-	1697	6.89	-170.2	28.8	19.3
GW1	15/12/17	3.89	1.01	1757	7.07	-26.8	172.2	19.9
GW1	15/03/18	3.75	0.11	1904	6.67	-239.8	-40.8	21.5
GW1	15/06/18	3.22	0.55	1767	6.68	-107.0	92.0	17.2
GW1	13/09/18	3.33	1.10	1909	6.60	-244.0	-45.0	20.9
GW1	13/12/18	3.27	0.33	2209	7.00	-179.5	19.5	20.7
GW1	14/03/19	3.21	0.16	2290	6.97	-315.3	-116.3	21.9
GW1	13/06/19	3.15	0.35	2133	6.73	-241.8	-42.8	20.8
GW1	17/09/19	-	0.22	2102	6.99	-223.0	-24.0	18.1
GW1	16/12/19	-	0.30	1832	6.64	-168.8	30.2	21.4
GW1	16/03/20	-	0.05	1819	7.20	-265.1	-66.1	19.5
GW1	16/06/20	2.97	0.20	1885	7.05	-365.6	-166.6	18.2
GW1	15/09/20	2.93	0.00	1682	7.26	-192.9	6.1	20.9
GW1	17/12/20	3.35	0.15	1693	7.32	-200.8	-1.8	23.6
GW1	11/03/21	-	2.56	1411	7.23	-71.1	127.9	21.6
GW1	11/06/21	2.94	0.13	1534	7.08	-95.9	103.1	19.0
GW1	14/09/21	2.41	2.00	876	7.45	53.9	252.9	17.1
GW1	15/12/21	2.00	1.03	567	7.43	34.0	233.0	18.1
GW1	02/03/22	1.99	1.12	786	7.23	27.0	226.0	18.7
GW1	15/06/22	2.12	1.00	567	7.33	33.0	232.0	17.1
GW1	14/09/22	3.02	0.78	1400	6.76	-91.5	107.5	20.0
GW1	12/12/22	2.22	1.03	451	6.89	-67.0	132.0	20.1
GW1	20/03/23	2.67	1.02	236	6.56	-32.0	167.0	19.2
GW1	09/06/23	3.26	0.25	1149	6.67	-155.3	43.7	18.6
GW3	16/09/11	1.77	0.00	7290	7.23	-10.0	189.0	19.3
GW3	15/12/11	1.45	0.28	4185	6.89	-144.0	55.0	19.6
GW3	22/03/12	1.14	0.96	2730	6.96	-64.0	135.0	19.2
GW3	22/06/12	1.51	1.88	3670	7.03	3.0	202.0	17.4
GW3	18/09/12	1.55	0.78	6650	6.99	-69.0	130.0	17.6
GW3	20/12/12	2.08	0.43	6810	7.44	-142.0	57.0	21.2
GW3	20/03/13	1.37	1.19	3132	7.11	-334.0	-135.0	23.5
GW3	17/06/13	1.82	0.19	6954	7.13	-159.0	40.0	18.7
GW3	18/09/13	1.67	0.05	5838	7.12	-125.0	74.0	17.7
GW3	16/12/13	1.77	1.13	7180	7.17	-155.0	44.0	25.0
GW3	14/03/14	2.11	1.23	6954	7.03	-168.8	30.2	22.0
GW3	16/06/14	1.67	2.47	7032	7.09	-114.0	85.0	19.8
GW3	26/09/14	1.60	0.14	6469	7.12	-162.1	36.9	19.3

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
GW3	16/12/14	1.06	0.30	3688	7.23	-131.2	67.8	19.0
GW3	16/03/15	1.49	0.58	5417	7.12	-127.9	71.1	19.5
GW3	15/06/15	1.22	0.24	4669	7.06	-97.5	101.5	17.9
GW3	14/10/15	1.44	0.60	5367	7.09	-82.5	116.5	17.5
GW3	11/12/15	1.52	0.35	6603	7.14	-120.0	79.0	21.6
GW3	29/03/16	1.51	0.74	5360	7.08	-155.0	44.0	20.3
GW3	15/06/16	1.25	0.70	2750	6.83	8.4	207.4	17.8
GW3	15/09/16	0.97	0.10	3135	7.24	-89.0	110.0	18.2
GW3	15/12/16	1.72	0.10	5191	6.98	-153.2	45.8	18.4
GW3	15/03/17	0.95	0.86	2563	7.50	-83.8	115.2	21.4
GW3	15/06/17	1.07	1.78	3613	6.80	-37.1	161.9	14.1
GW3	15/09/17	1.77	-	6050	7.14	-120.3	78.7	17.9
GW3	15/12/17	1.78	1.70	6193	7.31	45.2	244.2	19.3
GW3	15/03/18	1.76	0.66	7124	7.12	-33.3	165.7	23.1
GW3	15/06/18	1.03	0.55	6605	7.22	-35.0	164.0	20.1
GW3	13/09/18	1.06	0.65	6078	7.34	-39.0	160.0	22.0
GW3	13/12/18	1.60	1.74	6898	7.05	-97.5	101.5	20.9
GW3	14/04/19	1.59	0.77	6850	7.16	102.1	301.1	20.3
GW3	13/06/19	1.67	0.48	6095	7.02	-47.8	151.2	18.6
GW3	17/09/19	1.64	0.98	6720	7.07	-31.1	167.9	17.9
GW3	16/12/19	2.01	0.32	6446	7.11	-74.9	124.1	20.2
GW3	16/03/20	1.34	0.29	4802	6.76	-53.5	145.5	20.6
GW3	16/06/20	1.60	0.19	4737	7.05	-429.7	-230.7	18.0
GW3	15/09/20	1.42	0.08	3951	7.18	31.9	230.9	17.6
GW3	17/12/20	1.54	0.18	4870	7.44	-87.9	111.1	22.8
GW3	11/03/21	-	0.25	5019	7.36	-129.2	69.8	19.8
GW3	11/06/21	-	-	-	-	-	-	-
GW3	14/09/21	1.63	0.10	4011	7.18	22.2	221.2	16.7
GW3	15/12/21	1.45	0.34	4000	7.12	-45.0	154.0	17.1
GW3	28/03/22	1.34	0.67	4234	7.01	-34.0	165.0	18.9
GW3	15/06/22	1.30	0.56	4321	7.00	-30.0	169.0	17.1
GW3	14/09/22	-	3.49	3989	7.25	-7.3	191.7	16.6
GW3	12/12/22	1.56	2.78	3490	7.12	-15.0	184.0	18.9
GW3	20/03/23	1.34	0.91	789	6.78	-132.0	67.0	18.1
GW3	09/06/23	1.73	8.98	20	8.47	77.0	276.0	17.6
GW4	16/09/11	3.64	2.55	9240	7.02	52.0	251.0	20.6
GW4	15/12/11	3.70	0.82	6957	6.49	-131.0	68.0	20.9
GW4	22/03/12	2.37	2.01	9630	6.89	-63.0	136.0	20.1
GW4	22/06/12	3.23	0.44	18150	6.52	-101.0	98.0	18.3
GW4	18/09/12	3.49	-	6680	6.78	32.0	231.0	19.8
GW4	20/12/12	3.64	0.45	12890	6.66	16.0	215.0	23.9
GW4	20/03/13	3.62	0.63	10010	6.69	-263.0	-64.0	23.7
GW4	17/06/13	3.55	0.23	10776	6.61	-75.0	124.0	19.8
GW4	18/09/13	3.59	0.65	9330	6.68	-16.7	182.3	19.9
GW4	16/12/13	4.42	0.71	15860	6.48	-1.0	198.0	21.6
GW4	14/03/14	4.76	1.13	13882	6.41	-39.9	159.1	22.4
GW4	16/06/14	3.95	1.47	19185	6.37	-79.0	120.0	20.6
GW4	26/09/14	3.74	0.62	19244	6.42	-49.8	149.2	21.6
GW4	16/12/14	3.67	0.43	18302	6.57	0.9	199.9	23.5
GW4	16/03/15	2.76	0.24	16962	6.54	-213.0	-14.0	23.1
GW4	15/06/15	2.60	1.19	9584	6.77	-159.4	39.6	20.1
GW4	14/10/15	2.81	1.04	17945	6.47	40.4	239.4	20.3
GW4	11/12/15	2.78	0.59	14577	6.74	-56.3	142.7	28.0
GW4	29/03/16	2.61	1.20	14171	6.68	-148.0	51.0	21.8
GW4	16/06/16	2.86	0.30	23767	6.37	-135.3	63.7	20.7
GW4	15/09/16	2.50	0.30	13690	6.70	-29.1	169.9	20.3
GW4	15/12/16	2.76	0.21	10263	6.64	-132.7	66.3	19.6
GW4	15/03/17	2.60	0.53	21075	6.86	-103.6	95.4	22.7
GW4	15/06/17	2.50	0.02	16803	5.96	-91.4	107.6	18.4
GW4	15/09/17	2.69	-	21559	6.58	-119.0	80.0	20.4
GW4	15/12/17	2.89	1.54	13288	7.06	43.1	242.1	20.3
GW4	15/03/18	2.90	0.69	17476	6.54	-99.6	99.4	24.7

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
GW4	15/06/18	2.11	0.99	15655	6.67	-54.0	145.0	20.2
GW4	13/09/18	2.03	0.77	16455	6.55	-34.0	165.0	19.9
GW4	13/12/18	3.09	0.44	22708	6.39	-70.8	128.2	21.1
GW4	14/03/19	3.55	0.26	21190	6.47	-79.4	119.6	21.0
GW4	13/06/19	2.90	3.21	23821	-	0.0	199.0	-
GW4	17/09/19	3.10	1.53	20348	6.87	-46.9	152.1	20.7
GW4	16/12/19	3.20	0.45	18109	6.43	22.0	221.0	22.0
GW4	16/03/20	-	0.53	19351	6.34	-107.8	91.2	20.8
GW4	16/06/20	2.84	0.44	23504	6.28	-145.5	53.5	18.9
GW4	15/09/20	2.83	0.19	16677	6.69	-168.4	30.6	22.9
GW4	17/12/20	3.72*	2.01	19080	6.68	-124.9	74.1	24.8
GW4	11/03/21	-	0.16	17528	6.71	-127.4	71.6	22.4
GW4	11/06/21	3.2*	0.50	13104	6.41	-152.3	46.7	20.5
GW4	14/09/21	3.35	2.78	9483	6.65	-126.9	72.1	17.9
GW4	15/12/21	3.10	1.76	8456	6.67	-120.0	79.0	18.9
GW4	28/03/22	2.90	0.45	5672	6.98	-12.0	187.0	20.1
GW4	15/06/22	2.96	0.55	5876	6.99	-23.0	176.0	17.0
GW4	14/09/22	2.95	3.80	8621	6.69	68.9	267.9	19.5
GW4	12/12/22	2.90	1.45	3420	6.45	-23.0	267.9	19.7
GW4	20/03/23	3.00	0.24	560	6.70	-2.0	197.0	18.7
GW4	09/06/23	3.01	0.16	5973	6.47	-80.4	118.6	19.6

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
Surface Water								
SW1	16/09/11	-	3.37	1767	7.53	15.0	214.0	16.7
SW1	15/12/11	-	4.56	1384	8.59	12.0	211.0	21.6
SW1	22/03/12	-	4.91	1160	8.14	25.0	224.0	19.1
SW1	22/06/12	-	5.62	526	6.27	270.0	469.0	18.9
SW1	18/09/12	-	1.08	841	7.74	-36.0	163.0	12.9
SW1	20/12/12	-	3.62	501	6.90	-42.0	157.0	21.2
SW1	20/03/13	-	4.19	1889	8.07	-313.0	-114.0	24.7
SW1	17/06/13	-	6.10	1069	8.17	-79.3	119.7	12.3
SW1	18/09/13	-	6.51	605	8.50	23.0	222.0	16.7
SW1	16/12/13	-	1.82	554	7.05	143.0	342.0	21.6
SW1	14/03/14	-	4.36	720	7.35	2.4	201.4	20.9
SW1	16/06/14	-	10.53	674	8.19	-46.0	153.0	12.5
SW1	26/09/14	-	6.31	688	8.16	-66.9	132.1	18.6
SW1	16/12/14	-	Water quality meter faulty. No parameters measured.					
SW1	16/03/15	-	2.96		7.99	-92.0	107.0	20.2
SW1	15/06/15	-	2.11	622	9.21	-46.0	153.0	10.9
SW1	14/10/15	-	0.88	382	7.37	148.3	347.3	19.1
SW1	11/12/15	-	0.55	949	7.94	-142.0	57.0	25.2
SW1	29/03/16	-	2.14	1421	7.69	-127.4	71.6	21.3
SW1	15/06/16	-	5.53	608	7.28	-56.4	142.6	12.3
SW1	15/09/16	-	4.30	1016	7.87	-43.1	155.9	16.2
SW1	15/12/16	-	6.43	124	7.91	-58.9	140.1	20.7
SW1	15/03/17	-	8.23	242	9.00	-24.4	174.6	22.9
SW1	15/06/17	-	5.06	976	6.99	-54.4	144.6	12.2
SW1	15/09/17	-	-	644	7.63	-113.4	85.6	14.7
SW1	15/12/17	-	-	1768	7.55	-131.2	67.8	25.2
SW1	15/03/18	-	0.84	705	7.97	-115.0	84.0	24.1
SW1	15/06/18	-	0.67	777	7.70	-99.0	100.0	19.1
SW1	13/09/18	-	0.44	690	7.60	-103.0	96.0	20.5
SW1	13/12/18	-	4.32	1275	7.66	-143.1	55.9	23.9
SW1	14/03/19	-	7.00	950	7.61	-164.5	34.5	22.1
SW1	13/06/19	-	0.25	944	7.04	30.5	229.5	14.4
SW1	17/09/19	-	0.98	1057	7.40	-137.0	62.0	12.1
SW1	16/12/19	-	0.49	2466	7.73	-64.9	134.1	22.9
SW1	20/03/20	-	0.67	1180	7.41	-100.0	99.0	20.7
SW1	16/06/20	-	5.91	599	7.92	-366.8	-167.8	12.4
SW1	15/09/20	-	4.81	968	8.40	42.6	241.6	18.2
SW1	17/12/20	-	1.90	426	7.23	-4.7	194.3	24.8
SW1	11/03/21	-	4.56	692	7.70	35.4	234.4	22.9
SW1	11/06/21	-	8.08	538	7.72	17.0	216.0	11.1
SW1	14/09/21	-	9.80	288	7.72	41.0	240.0	13.8
SW1	15/12/21	-	3.45	345	7.75	34.0	233.0	18.5
SW1	28/03/22	-	2.11	123	7.01	12.0	211.0	19.1
SW1	15/06/22	-	2.34	321	7.11	14.0	213.0	17.2
SW1	14/09/22	-	2.40	1420	7.82	-55.7	143.3	15.8
SW1	12/12/22	-	2.34	1230	7.50	-22.0	177.0	19.0
SW1	14/03/23	-	3.67	1239	7.22	129.0	328.0	19.9
SW1	09/06/23	-	3.52	411	6.63	-95.2	103.8	13.7
SW2	16/09/11	-	2.01	456	8.31	42.0	241.0	14.1
SW2	15/12/2011	-	1.41	353	7.01	-69.0	130.0	19.2
SW2	22/03/12	-	5.09	470	7.47	-64.0	135.0	18.4
SW2	22/06/12	-	3.61	526	6.72	106.0	305.0	19.1
SW2	18/09/12	-	2.62	541	8.07	227.0	426.0	17.4
SW2	20/12/12	-	2.56	639	6.76	25.0	224.0	20.9
SW2	20/03/13	-	1.84	521	7.45	-379.0	-180.0	20.2
SW2	17/06/13	-	0.46	383	7.04	-45.7	153.3	11.5
SW2	18/09/13	-	1.47	572	7.74	-105.7	93.3	15.4
SW2	16/12/13	-	1.40	429	7.36	-95.0	104.0	23.2
SW2	14/03/14	-	0.54	244	6.56	-126.5	72.5	20.9
SW2	16/06/14	-	2.17	304	6.85	-31.0	168.0	12.6
SW2	26/09/14	-	0.49	310	7.03	-160.3	38.7	18.0

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
SW2	16/12/14	-	1.11	247	7.27	-84.0	115.0	21.4
SW2	16/03/15	-	4.41	323	8.29	-57.0	142.0	20.0
SW2	15/06/15	-	2.01	725	9.94	-42.0	157.0	10.1
SW2	14/10/15	-	0.50	537	7.17	-53.0	146.0	18.0
SW2	11/12/15	-	1.84	534	7.62	-38.0	161.0	27.7
SW2	29/03/16	-	0.01	538	6.42	-162.4	36.6	19.8
SW2	15/06/16	-	0.01	981	6.88	29.1	228.1	10.8
SW2	15/09/16	-	1.43	651	7.55	-148.4	50.6	15.8
SW2	15/12/16	-	1.66	240	7.72	-71.0	128.0	20.6
SW2	15/03/17	-	3.60	426	8.13	-23.3	175.7	22.0
SW2	15/06/17	-	1.60	593	6.70	-14.7	184.3	10.7
SW2	15/09/17	-	-	802	7.64	-112.7	86.3	15.7
SW2	15/12/17	-	-	436	7.63	7.4	206.4	21.7
SW2	15/03/18	-	8.60	345	8.90	-100.3	98.7	21.4
SW2	15/06/18	-	1.33	354	8.30	-45.0	154.0	17.6
SW2	13/09/18	-	8.60	345	8.90	-100.3	98.7	20.1
SW2	13/12/18	-	3.05	333	7.21	-51.5	147.5	24.8
SW2	14/03/19	-	1.08	330	8.30	-148.7	50.3	22.0
SW2	13/06/19	-	0.59	325	7.19	-197.0	2.0	12.3
SW2	17/09/19	-	1.20	357	7.43	-88.0	111.0	11.1
SW2	16/12/19	-	3.27	541	7.32	67.2	266.2	26.1
SW2	20/03/20	-	1.03	395	7.30	-45.0	154.0	20.8
SW2	16/06/20	-	0.35	307	7.89	-436.0	-237.0	11.1
SW2	15/09/20	-	0.69	422	7.17	-179.2	19.8	17.1
SW2	17/12/20	-	0.18	244	7.06	-168.1	30.9	22.8
SW2	11/03/21	-	2.07	413	6.92	-168.9	30.1	21.6
SW2	11/06/21	-	2.69	181	6.84	-94.0	105.0	11.9
SW2	14/09/21	-	2.03	228	7.26	48.9	247.9	13.5
SW2	15/12/21	-	1.87	213	7.45	34.0	233.0	18.1
SW2	28/03/22	-	1.34	167	7.12	23.0	222.0	18.7
SW2	15/06/22	-	1.12	204	7.02	34.0	233.0	17.8
SW2	14/09/22	-	1.63	613	6.53	-107.0	92.0	16.0
SW2	12/12/22	-	1.78	879	7.03	-100.0	99.0	19.0
SW2	14/03/23	-	5.60	989	7.01	233.0	432.0	19.9
SW2	09/06/23	-	1.52	539	4.82	-85.5	113.5	12.7

Notes:
ORP - oxidation reduction potential as measured with a platinum electrode and silver-chloride reference electrode.
Eh - redox potential relative to the standard hydrogen electrode (calculated as Eh = ORP + 199 mV)
SWL: Standing Water Level
m BTOC: metres Below Top of Casing

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/09/2011	13/01/2012	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.3	7.39	7.35	7.54	7.51	7.31	7.38	7.46	7.51	7.39	7.11	7.84	7.05
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**2420**	2060	1840	1800	**2240**	**2240**	2030	2020	**2240**	1860	2040	1840	1800
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	1040	1060	961	932	1250	1160	1000	965	1250	826	999	830	824
Total Alkalinity as CaCO3	mg/L	1	-	-	1040	1060	961	932	1250	1160	1000	965	1250	826	999	830	824
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	49	<10	14	20	<1	<1	7	<10	<10	35	<10	35	197
Cations and Anions																	
Chloride	mg/L	1	-	-	162	104	66	70	106	108	86	89	106	85	103	85	74
Calcium	mg/L	1	-	-	135	172	195	179	219	209	200	176	219	188	168	183	183
Magnesium	mg/L	1	-	-	92	85	90	81	100	101	85	79	100	76	79	73	88
Sodium	mg/L	1	-	-	223	199	120	120	170	175	151	140	170	128	129	118	124
Potassium	mg/L	1	-	-	12	12	10	10	12	13	13	12	12	14	14	13	12
Total Anions	meq/L	0.01	-	-	-	24.1	21.4	-	28	26.2	22.6	21.8	28	19.6	22.9	19.7	22.6
Total Cations	meq/L	0.01	-	-	-	24.5	22.6	-	26.9	26.7	23.9	21.7	26	21.6	20.8	20.6	22.1
Ionic Balance	%	0.01	-	-	-	0.87	2.86	-	2.02	0.86	2.85	0.26	2	4.69	4.61	2.22	1.3
Total Metals																	
Manganese	mg/L	0.001	1.9	-	1.01	1.4	1.85	**2.57**	**2.45**	**2.16**	1.9	**1.96**	**2.45**	1.5	1.45	1.09	0.646
Iron	mg/L	0.05	-	-	4.66	3.75	3	7.17	17.3	20.1	7.15	16.4	17.3	10	13.2	2.88	1.74
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.962	1.21	**2.4**	**2.51**	**2.56**	**2.28**	**2.26**	**2.05**	**2.56**	1.31	1.45	1.06	0.584
Iron	mg/L	0.05	-	-	4.81	3.75	3.58	7.44	0.93	<0.05	0.33	0.05	0.93	0.17	<0.05	1.7	0.12
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.3	0.2	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.4
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	**3.48**	**3.37**	**2.14**	**2.17**	**3.73**	**4.63**	**2.67**	**4.01**	**3.73**	**3.85**	**4.64**	**3.81**	**1.26**
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.01	**2.45**	0.01	<0.01	<0.1	<0.1	<0.01	<0.01	0.01	<0.10	<0.01	0.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	0.01	**2.45**	0.01	<0.01	<0.1	<0.1	<0.01	<0.01	0.01	<0.10	<0.01	0.02
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	24	24	19	19	25	25	21	27	25	24	21	21	18
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	<2	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	<2	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
Napthalene															-	-	-
Naphthalene	µg/L	7	16	-	-	-	<7	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds															-	-	-
Vinyl Acetate	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/09/2011	13/01/2012	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/12/2014	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	6.86	7.47	7.21	7.36	7.83	7.24	7.88	7.62	7.43	7.32	7.36	7.48	6.96
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1760	1830	1620	1820	1830	1640	1500	4150	1910	1710	1720	1810	2060
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	764	952	911	838	783	914	551	671	942	788	686	912	1120
Total Alkalinity as CaCO3	mg/L	1	-	-	764	952	911	838	783	914	551	671	942	788	686	912	1120
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	83	37	49	30	151	5	157	87	<1	76	114	<10	<10
Cations and Anions																	
Chloride	mg/L	1	-	-	50	73	59	70	85	64	107	851	86	92	76	79	106
Calcium	mg/L	1	-	-	211	193	168	169	212	195	168	21	195	165	169	184	196
Magnesium	mg/L	1	-	-	82	101	70	80	99	78	60	55	80	74	69	71	80
Sodium	mg/L	1	-	-	94	122	92	99	107	114	90	745	123	99	105	110	116
Potassium	mg/L	1	-	-	9	8	6	6	7	8	11	1	10	10	10	8	10
Total Anions	meq/L	0.01	-	-	18.4	21.8	20.9	19.3	21.2	0.01	-	39.2	21.2	19.9	18.2	20.4	
Total Cations	meq/L	0.01	-	-	21.6	23.4	18.3	19.5	23.6	0.01	-	38	21.9	18.9	18.9	20	
Ionic Balance	%	0.01	-	-	7.98	3.53	6.6	0.34	5.31	0.01	-	1.61	1.56	2.67	1.91	1.08	
Total Metals																	
Manganese	mg/L	0.001	1.9	-	0.802	0.709	0.88	0.53	0.322	0.791	0.5	0.396	0.841	0.581	0.683	0.86	1.09
Iron	mg/L	0.05	-	-	4.22	7.05	2.46	2.94	4.32	5	3.25	2.00	8.7	6.91	7.52	6.59	11.4
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.806	0.653	0.688	0.574	0.337	0.784	0.495	0.323	0.736	0.522	0.64	0.807	1.07
Iron	mg/L	0.05	-	-	2.65	1.69	0.72	<0.05	0.71	3.12	1.99	0.41	3.98	2.92	3.68	3.7	10.1
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.7	0.3	0.4	0.3	0.3	0.3
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	**1.2**	**1.85**	**1.44**	**2.45**	**1.25**	**2.46**	0.58	0.07	**2.41**	**0.98**	**1.9**	**2.61**	**5.06**
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.17	0.03	<0.01	<0.01	0.01	0.02	1	0.01	0.02	<0.01	0.02	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	**0.17**	0.03	<0.01	<0.01	0.01	0.02	**1**	0.01	0.03	<0.01	0.02	<0.01
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	12	25	13	9	16	17	10	12	14	13	16	14	20
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene					-	-					-	-	-	-	-	-	-
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds					-	-											
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/12/2014	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.31	7.65	7.2	7.37	7.38	7.66	7.07	7.71	7.64	7.56	7.26	7.64	7.23
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1910	976	2220	2180	2100	2030	2000	1920	1800	2170	1682	1780	1411
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	988	165	1010	792	980	879	640	830	629	890	815	868	378
Total Alkalinity as CaCO3	mg/L	1	-	-	988	165	1010	792	982	879	640	830	629	890	815	868	378
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	84	64	<1	206	42	49	278	<1	80	156	83	68	175
Cations and Anions																	
Chloride	mg/L	1	-	-	172	191	160	180	143	160	133	174	149	182	123	146	148
Calcium	mg/L	1	-	-	205	29	238	254	186	208	213	184	177	216	191	190	102
Magnesium	mg/L	1	-	-	79	16	89	106	84	90	85	77	70	92	78	64	37
Sodium	mg/L	1	-	-	124	140	146	147	131	138	136	123	130	163	136	132	119
Potassium	mg/L	1	-	-	9	7	13	7	7	9	14	10	12	7	9	10	7
Total Anions	meq/L	0.01	-	-	26.3	10	24.7	25.2	24.5	23.1	22.3	21.5	18.4	26.2	21.5	22.9	15.4
Total Cations	meq/L	0.01	-	-	22.4	9.03	25.9	28	22.1	24	23.9	21.1	20.6	25.6	22.1	20.7	13.5
Ionic Balance	%	0.01	-	-	8.18	5.17	2.36	5.23	5.27	1.96	3.4	0.86	5.43	1.05	1.41	4.88	6.52
Total Metals																	
Manganese	mg/L	0.001	1.9	-	0.893	-	1.05	0.204	0.365	0.344	1.79	0.598	0.398	0.874	0.369	0.296	0.186
Iron	mg/L	0.05	-	-	11.8	-	25.6	2.96	1.77	0.86	14.7	4.9	0.55	6.51	1.81	1.12	0.32
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.898	0.033	0.933	0.178	0.34	0.34	**1.96**	0.522	0.402	0.874	0.348	0.294	0.17
Iron	mg/L	0.05	-	-	10.5	0.16	<0.05	1.17	0.15	0.08	6.69	<0.05	0.31	1.27	0.43	0.41	0.29
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.3	0.6	0.4	0.4	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.4
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	**4.16**	**6.99**	**6.83**	**1.27**	**11**	**7.32**	**8.35**	**6.88**	**1.01**	**2.33**	**1.87**	**2.74**	0.52
Nitrite as N	mg/L	0.01	-	-	0.03	0.03	<0.01	0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	-	<0.01	0.01	0.06	<0.01	0.03	0.17	<0.01	0.1	<0.01	<0.01	0.09
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	-	<0.01	0.02	0.06	<0.01	0.03	**0.20**	<0.01	**0.10**	<0.01	<0.01	**0.09**
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	22	19	22	18	21	19	20	22	42	3	18	28	16
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene					-	-											
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW3	GW3
				Sample Date	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	16/09/2011	15/12/2011
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**											
pH															
pH Value	pH Unit	0.01	-	6.5 - 8.0	8.05		7.03	7		6.76	6.65	6.56	6.67	7.58	7.6
Electrical Conductivity															
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1680		1500	1400	1200	1400	1230	236	1149	**7670**	**4540**
Alkalinity															
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	487	261	480	49	508	509	499	50	932	1240	791
Total Alkalinity as CaCO3	mg/L	1	-	-	487	261	480	43	508	509	499	50	932	1240	791
Sulfate															
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	112	65	51	9	98	58	45	4	417	170	`
Cations and Anions															
Chloride	mg/L	1	-	-	230	138	99	26	66	95	67	16	2340	1520	913
Calcium	mg/L	1	-	-	114	64	110	17	108	117	117	17	13	27	21
Magnesium	mg/L	1	-	-	42	22	36	5.3	42	37	42	2	168	126	80
Sodium	mg/L	1	-	-	175	109	106	15	110	108	110	13	1640	1510	938
Potassium	mg/L	1	-	-	11	10	11	2.8	10	13	10	1	13	1	2
Total Anions	meq/L	0.01	-	-	18.6	10.5	13.4	3.4	14	14	14	1.53	6.4	-	43.9
Total Cations	meq/L	0.01	-	-	17	10	13.3	3.3	13.9	13.9	13.9	1.6	6.46	-	48.5
Ionic Balance	%	0.01	-	-	4.25	2.25	0.38	0.23	0.59	0.51	0.51	-	0.43	-	4.89
Total Metals															
Manganese	mg/L	0.001	1.9	-	0.175	0.111	0.208	6	0.351	0.409	0.208	<0.001	2.48	0.236	0.211
Iron	mg/L	0.05	-	-	1.14	1.25	1.22	6	1.08	1.18	1.22	<0.05	0.84	<0.05	1.25
Dissolved Metals															
Manganese	mg/L	0.001	1.9	-	0.149	0.026	0.226	5	0.38	37	22	<0.001	1.59	0.248	0.253
Iron	mg/L	0.05	-	-	0.22	0.18	0.97	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.49	2.72
Fluoride															
Fluoride	mg/L	0.1	-	-	0.3	0.4	0.6	0.91	0.3	0.2	0.2	1.1	<0.1	0.8	0.8
Nitrate, Nitrite & Ammonia															
Ammonia as N	mg/L	0.01	0.9	-	0.83	0.21	0.54	0.38	1.36	1.77	0.65	0.34	0.41	0.03	0.04
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.19	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	0.05	0.06	0.36	<0.01	<0.01	<0.01	0.14	<0.01	0.02	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.03	**0.05**	**0.06**	**0.20**	<0.01	<0.01	<0.01	0.16	<0.01	0.02	<0.01
Total Organic Carbon															
Total Organic Carbon	mg/L	1	-	-	5	15	12	4.5	12	22	14	2	4	19	24
Monocyclic Aromatic Hydrocarbons															
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene															
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds															
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants															
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW3	GW3
				Sample Date	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	16/09/2011	15/12/2011
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**											
Halogenated Aliphatic Compounds															
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<0.3	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	-	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<1	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<0..5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds															
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<0.3	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes															
Chloroform	µg/L	5	770	-	<5	<5	<5	75	<5	<5	<5	26	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	17	<5	<5	<5	6	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.42	7.73	7.76	7.67	7.59	7.69	7.76	7.63	7.12	**8.05**	7.12	7.75	7.63
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**3180**	**3890**	**6770**	**7470**	**4180**	**7160**	**6700**	**7630**	**7880**	**8170**	**7940**	**3980**	**5960**
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	548	705	1300	1340	683	1150	1300	1240	1370	1320	1510	579	1010
Total Alkalinity as CaCO3	mg/L	1	-	-	548	705	1900	1340	683	1150	1900	1240	1370	1320	1510	579	1010
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	81	134	166	186	88	144	166	170	172	163	187	82	115
Cations and Anions																	
Chloride	mg/L	1	-	-	671	856	1360	1730	822	1380	1360	1610	1620	1580	1910	910	1230
Calcium	mg/L	1	-	-	19	22	37	35	20	38	37	41	37	47	44	20	30
Magnesium	mg/L	1	-	-	50	62	136	158	65	128	136	146	155	159	162	60	111
Sodium	mg/L	1	-	-	587	795	1380	1530	820	1330	1380	1420	1500	1490	1490	704	1260
Potassium	mg/L	1	-	-	4	3	2	1	2	2	2	1	2	2	2	1	1
Total Anions	meq/L	0.01	-	-	31.6	-	79.8	79.4	38.7	64.9	79.8	73.7	76.6	74.3	87.9	39	57.3
Total Cations	meq/L	0.01	-	-	30.7	-	73.1	81.3	42.1	70.3	73.1	75.8	79.9	80.3	80.4	36.6	65.5
Ionic Balance	%	0.01	-	-	1.42	-	4.4	1.14	4.18	3.98	4.4	1.39	2.04	3.82	4.52	3.16	6.64
Total Metals																	
Manganese	mg/L	0.001	1.9	-	0.512	0.429	0.884	0.729	0.238	0.818	0.884	0.615	0.472	0.84	0.501	0.337	0.628
Iron	mg/L	0.05	-	-	2.14	1.37	7.95	6.72	2.74	6.79	7.95	6.12	3.71	3.99	3.07	4.89	6.21
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.424	**2.54**	0.885	0.693	0.306	0.863	0.855	0.532	0.545	0.812	0.439	0.274	0.506
Iron	mg/L	0.05	-	-	4.9	7.42	<0.05	<0.05	1.11	<0.05	<0.05	<0.05	<0.05	1.56	2.53	1.6	3.08
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.8	0.7	0.8	1	0.7	1.1	0.8	0.8	1	1.1	1	0.7	0.8
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	0.14	0.11	0.2	<0.1	0.09	0.25	0.2	0.19	0.17	0.6	0.23	0.14	0.26
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.15	<0.01	**12.8**	0.02	<0.01	<0.01	**12.8**	0.04	0.09	0.01	0.02	0.02	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.15**	<0.01	**12.8**	0.02	<0.01	<0.01	**12.8**	**0.04**	**0.09**	0.01	0.02	0.02	<0.01
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	17	19	16	23	17	24	16	35	20	25	18	18	30
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																	
Naphthalene	µg/L	7	16	-	<7	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.25	7.56	**8.63**	7.6	7.57	7.63	7.66	7.08	7.56	7.75	7.39	7.71	7.79
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**4160**	**6800**	**7130**	**6110**	**3290**	**1610**	**6720**	**2460**	**6300**	**7050**	**7460**	**7320**	**6240**
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	109	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	743	1010	1040	1110	343	748	1030	297	809	1120	1360	1650	1550
Total Alkalinity as CaCO3	mg/L	1	-	-	743	1010	1150	1110	343	748	1030	297	809	1120	1360	1650	1550
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	92	132	168	133	86	94	96	50	95	104	194	234	170
Cations and Anions																	
Chloride	mg/L	1	-	-	814	1430	1620	1330	798	66	1460	592	1270	1370	1640	1740	1390
Calcium	mg/L	1	-	-	25	37	40	28	31	164	46	20	35	41	36	44	36
Magnesium	mg/L	1	-	-	57	105	127	101	57	71	116	55	98	133	133	149	132
Sodium	mg/L	1	-	-	746	1140	1260	1210	541	100	1320	656	1060	1310	1320	1520	1450
Potassium	mg/L	1	-	-	2	1	1	<1	3	5	2	2	2	1	1	1	1
Total Anions	meq/L	0.01	-	-	39.7	63.3	72.2	20.2	-	18.8	63.8	23.7	54	63.2	77.5	86.9	73.7
Total Cations	meq/L	0.01	-	-	38.4	60.1	67.3	21.3	-	18.5	69.3	34.1	56	70	70.2	80.6	75.8
Ionic Balance	%	0.01	-	-	1.68	2.6	3.54	2.75	-	0.7	4.17	1.8	1.82	5.11	4.94	3.77	1.36
Total Metals																	
Manganese	mg/L	0.001	1.9	-	0.922	1.12	1.08	0.391	0.5	0.406	0.761	0.421	0.782	0.989	0.812	0.735	0.317
Iron	mg/L	0.05	-	-	3.99	10.2	9.19	5.15	9.34	2.34	12.1	13.2	0.34	14.4	6.22	3.52	<0.05
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.677	0.918	0.965	0.437	0.432	0.158	0.823	0.374	0.782	0.864	0.757	0.586	-
Iron	mg/L	0.05	-	-	1.31	<0.05	7.2	3.66	0.7	<0.05	8.87	1.72	0.34	1.37	2.31	0.44	-
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.7	0.9	0.8	0.8	0.4	0.4	0.8	0.5	0.7	0.8	0.8	0.9	0.8
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	0.48	0.69	0.74	0.25	0.16	0.14	1.15	0.14	0.54	0.79	0.44	0.21	0.22
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	3.03	<0.01	<0.01	<0.01	0.02	0.32
Nitrate as N	mg/L	0.01	2.4	-	0.01	<0.01	0.04	<0.01	<0.01	<0.01	**5.78**	0.01	0.06	<0.01	<0.01	0.04	-
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.01	0.01	**0.04**	<0.01	<0.01	<0.01	**5.78**	**3.04**	**0.06**	<0.01	<0.01	**0.06**	-
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	17	15	24	23	17	25	23	43	26	24	23	33	29
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																	
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.86	7.46	7.53	7.96	7.88	**8.06**	7.44	7.47	7.18	7.81	7.36	-	
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**7130**	**7180**	**7380**	**6320**	**6360**	**5330**	**4800**	**5410**	**3951**	**5270**	**5019**	**-**	
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	1380	1220	1440	1040	1420	1190	383	1040	979	1300	1340	-	713
Total Alkalinity as CaCO3	mg/L	1	-	-	1380	1220	1440	1040	1420	1190	383	1040	979	1300	1340	-	713
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	179	172	206	129	118	156	328	209	150	143	130	-	221
Cations and Anions																	
Chloride	mg/L	1	-	-	1500	1440	1370	1240	1150	1090	1190	1190	933	944	991	-	984
Calcium	mg/L	1	-	-	39	43	33	32	37	22	48	32	26	28	23	-	34
Magnesium	mg/L	1	-	-	144	130	123	104	119	84	97	92	75	78	74	-	85
Sodium	mg/L	1	-	-	1530	1380	1420	1240	1360	1120	826	1120	959	1060	1010	-	826
Potassium	mg/L	1	-	-	1	1	1	1	1	<1	4	1	1	1	1	-	4
Total Anions	meq/L	0.01	-	-	73.6	68.6	71.1	58.4	63.3	57.8	48	58.7	49	55.6	57.4	-	46.6
Total Cations	meq/L	0.01	-	-	80.4	72.9	13.6	67.1	70.8	56.7	46.4	57.9	49.2	53.9	51.2	-	44.7
Ionic Balance	%	0.01	-	-	4.39	3.05	1.28	4.63	5.63	0.91	1.74	0.68	0.21	1.49	5.74	-	2.06
Total Metals																	
Manganese	mg/L	0.001	1.9	-	0.321	1.70	0.96	0.64	0.74	0.389	0.349	0.476	0.358	0.466	0.542	-	0.420
Iron	mg/L	0.05	-	-	1.99	1.75	6.42	4.38	23.4	2.34	3.19	1.85	2.31	1.12	3.74	-	15.9
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.061	1.84	0.99	0.57	0.582	0.275	0.32	0.455	0.332	0.462	0.529	-	0.337
Iron	mg/L	0.05	-	-	<0.05	1.25	<0.05	0.06	0.11	0.08	0.1	0.13	0.08	2.09	3.74	-	0.1
Fluoride																	
Fluoride	mg/L	0.1	-	-	1	1	1	1	1	1	0.6	0.8	0.8	0.9	1	-	0.9
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	0.08	0.34	0.63	**0.91**	0.7	0.36	0.13	0.33	0.14	0.58	0.76	-	0.16
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.32	0.02	<0.01	<0.01	0.08	0.19	0.51	0.04	0.08	0.04	<0.01	-	0.08
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.32	0.02	<0.01	<0.01	**0.08**	**0.19**	**0.51**	**0.04**	**0.08**	**0.04**	<0.01	**-**	**0.08**
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	21	23	31	23	27	26	28	5	22	21	12	-	15
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																	
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW4	GW4	GW4	GW4	GW4
				Sample Date	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	16/09/2011	15/12/2011	22/06/2012	22/03/2012	18/09/2012
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**												
pH																
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.33	7.2		7.25	7.22	6.78	8.47	7.37	7.2	7.39	7.18	7.61
Electrical Conductivity																
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**5030**	**5000**		**3989**	**5454**	789	20	**9700**	**7060**	**9470**	**17300**	**6880**
Alkalinity																
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	478	41	1050	899	948	45	1140	860	867	891	711	977
Total Alkalinity as CaCO3	mg/L	1	-	-	478	41	1050	899	948	45	1140	860	867	891	711	977
Sulfate																
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	333	9	148	114	<10	8	167	405	311	473	894	319
Cations and Anions																
Chloride	mg/L	1	-	-	1550	26	1120	999	700	26	1300	2130	1580	2680	5860	1420
Calcium	mg/L	1	-	-	46	17	27	26	93	17	28	14	9	17	52	11
Magnesium	mg/L	1	-	-	119	5.3	86	70	114	3	90	184	122	210	584	135
Sodium	mg/L	1	-	-	1080	15	1100	938	508	9	1180	1860	1380	1820	3000	1330
Potassium	mg/L	1	-	-	4	2.8	2	2	10	1	1	16	13	19	36	15
Total Anions	meq/L	0.01	-	-	60.2	23	55.6	48.5	38.7	1.8	62.9	-	68.4	-	198	66.2
Total Cations	meq/L	0.01	-	-	59.2	26	56.3	47.9	36.4	1.51	60.2	-	70.8	-	182	69.9
Ionic Balance	%	0.01	-	-	0.87	0.3	0.6	0.63	3.08	-	2.25	-	1.75	-	4.24	2.67
Total Metals																
Manganese	mg/L	0.001	1.9	-	0.499	5	0.54	0.486	0.133	0.001	0.501	1.44	1.25	1.65	1.38	1.19
Iron	mg/L	0.05	-	-	5.11	7	2.38	13.5	11.7	<0.05	13.8	<0.05	0.31	0.32	0.16	0.43
Dissolved Metals																
Manganese	mg/L	0.001	1.9	-	0.512	5	0.52	0.176	0.118	<0.001	0.335	1.65	1.24	**1.99**	**2.31**	1.19
Iron	mg/L	0.05	-	-	1.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.23	0.98	0.68	0.46	<0.05
Fluoride																
Fluoride	mg/L	0.1	-	-	0.7	0.91	1	0.7	0.6	0.9	0.8	0.7	0.8	0.7	1.3	0.7
Nitrate, Nitrite & Ammonia																
Ammonia as N	mg/L	0.01	0.9	-	0.89	0.37	0.49	0.23	6.63	0.29	0.35	0.03	0.05	0.12	<0.10	0.04
Nitrite as N	mg/L	0.01	-	-	<0.01		<0.01	**<0.01**	**<0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	0.36	0.05	0.06	0.01	0.13	0.05	<0.01	<0.01	<0.01	0.08	1.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.02	**0.36**	**0.05**	**0.06**	**0.01**	0.13	0.22	<0.01	<0.01	<0.01	**0.08**	**1.02**
Total Organic Carbon																
Total Organic Carbon	mg/L	1	-	-	19	4.6	15	24	124	2	23	15	23	17	10	10
Monocyclic Aromatic Hydrocarbons																
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	<1	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	<2	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	<2	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	<2	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
Napthalene																
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	<7	-
Volitile Organic Compounds																
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	<50	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	<50	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	<50	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	<50	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
Fumigants																
2.2-Dichloropropane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW4	GW4	GW4	GW4	GW4
				Sample Date	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	16/09/2011	15/12/2011	22/06/2012	22/03/2012	18/09/2012
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**												
Halogenated Aliphatic Compounds																
Dichlorodifluoromethane	µg/L	50	-	-	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<0.3	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<1	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<0..5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																
Chlorobenzene	µg/L	5	55	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<0.3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																
Chloroform	µg/L	5	770	-	<5	75	<5	<5	<5	27	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	18	<5	<5	<5	6	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015	15/06/2015	14/10/2015	11/12/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.14	7.20	7.33	7.61	7.27	7	7.68	**6.42**	7.40	7.32	6.99	7.25	**8.47**
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**12600**	**7700**	**8260**	**6880**	**11800**	**15100**	**18500**	**19700**	**16500**	**12800**	**7770**	**11600**	**10100**
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	62
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	705	944	908	977	790	656	648	711	595	840	1180	791	796
Total Alkalinity as CaCO3	mg/L	1	-	-	705	944	908	977	790	656	648	711	595	840	1180	791	858
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	708	372	424	977	584	829	939	1020	889	659	375	476	549
Cations and Anions																	
Chloride	mg/L	1	-	-	3740	1460	1800	1420	3120	4280	5440	5930	5140	3620	1770	3130	2850
Calcium	mg/L	1	-	-	22	11	11	11	22	29	58	62	56	26	12	21	16
Magnesium	mg/L	1	-	-	363	150	155	135	279	420	604	726	548	358	164	232	214
Sodium	mg/L	1	-	-	2360	1410	1540	1330	2100	2710	3330	3640	3010	2700	1490	1850	1850
Potassium	mg/L	1	-	-	23	14	16	15	24	31	36	40	26	23	12	16	16
Total Anions	meq/L	0.01	-	-	134	68.6	77.8	66	116	151	186	203	175	133	81.3	114	109
Total Cations	meq/L	0.01	-	-	134	74.6	80.7	69	116	155	198	222	179	149	79.2	101	99.3
Ionic Balance	%	0.01	-	-	0.06	4.12	1.83	2.67	<0.01	1.15	3.21	4.56	1.13	5.72	1.34	6.06	4.67
Total Metals																	
Manganese	mg/L	0.001	1.9	-	1.66	1.38	1.6	1.19	1.8	1.61	**2.2**	**2.5**	**1.97**	**6.83**	**2.26**	**3.57**	**2.46**
Iron	mg/L	0.05	-	-	0.26	1.87	0.45	0.53	0.27	0.16	0.54	0.36	0.25	2.6	0.72	1.34	0.84
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	1.3	1.45	1.65	1.19	1.64	1.55	**2.05**	**2.29**	**2.08**	**5.99**	1.84	**2.68**	**2.16**
Iron	mg/L	0.05	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.24	0.23	0.14	0.19	0.46	<0.05	0.56
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.8	0.8	0.9	0.7	0.7	0.7	0.9	0.7	0.8	0.7	0.8	0.8	0.8
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	<0.1	0.11	0.07	0.04	0.08	0.07	0.07	0.02	0.13	0.83	0.43	0.33	0.3
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	0.02	0.01	1.12	0.01	0.06	0.04	0.02	<0.01	<0.01	0.01	0.26	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.02	0.02	0.01	**1.12**	0.01	**0.06**	**0.04**	0.02	<0.01	<0.01	0.01	**0.26**	<0.01
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	11	11	15	17	34	6	8	2	5	18	5	10	14
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene										-	-	-	-	-			
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds										-	-	-	-	-			
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015	15/06/2015	14/10/2015	11/12/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.16	7.31	7.16	7.46	6.96	7.05	7.33	7.16	7.29	7.11	7.15	6.82	7.16
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**9890**	**22500**	**15800**	**9700**	**21,200**	**23,600**	**21,000**	**12,500**	**1,900**	**15,800**	**21,300**	**20,600**	**22,800**
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	942	724	821	907	762	650	671	904	706	719	578	559	649
Total Alkalinity as CaCO3	mg/L	1	-	-	942	724	821	907	762	650	671	904	706	719	578	559	649
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	393	1180	812	400	946	1090	809	575	932	1180	1240	1180	1280
Cations and Anions																	
Chloride	mg/L	1	-	-	2720	6990	4650	2650	6000	7460	5840	3360	6030	6500	7520	6560	7410
Calcium	mg/L	1	-	-	22	95	50	19	64	90	50	28	44	66	74	59	69
Magnesium	mg/L	1	-	-	274	839	596	181	572	792	549	339	510	706	792	624	747
Sodium	mg/L	1	-	-	2280	4050	3180	1840	3350	3920	3190	2360	2970	3560	3820	3380	3650
Potassium	mg/L	1	-	-	17	31	24	18	26	32	25	18	21	27	29	26	29
Total Anions	meq/L	0.01	-	-	62.5	-	164	101	204	246	195	125	204	222	249	221	249
Total Cations	meq/L	0.01	-	-	62.3	-	190	96.3	197	241	187	132	174	217	236	202	224
Ionic Balance	%	0.01	-	-	0.13	-	7.3	2.46	1.88	1.05	2.07	2.95	7.87	1.22	2.83	4.45	5.12
Total Metals																	
Manganese	mg/L	0.001	1.9	-	**2.67**	**5.54**	**3.58**	**1.98**	**3.43**	**4.46**	**4.32**	**4.93**	**2.98**	**-**	**2.66**	**2.89**	**3.38**
Iron	mg/L	0.05	-	-	1.04	1.12	0.64	0.66	1.41	1	1.25	1.23	0.51	-	0.09	0.46	0.56
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	**2.53**	**5.52**	**3.22**	1.66	**3.17**	**3.2**	**3.2**	**2.69**	**2.82**	**2.86**	**3.18**	**2.77**	**3.49**
Iron	mg/L	0.05	-	-	1.02	1.02	0.42	1.11	1.27	0.76	0.58	0.61	0.46	0.06	0.09	0.42	0.44
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.7	0.7	0.7	0.7	0.8	0.6	0.7	0.7	0.8	0.6	0.8	1.1	0.7
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	0.19	0.19	0.08	0.24	0.17	0.14	0.11	0.2	0.15	0.12	0.11	0.13	0.1
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	1.61	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	0.02	-	<0.01	<0.01	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	**1.61**	<0.01	<0.01	**0.07**	**0.06**	<0.01	<0.01	**0.04**	-	<0.01	<0.01	<0.01
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	6	6	8	<1	7	6	7	8	6	6	3	3	3
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																	
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.26	7.18	7.55	7.38	7.06	6.69	7.27	6.71	7.93	6.65	7.05	7.02	7
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**20,200**	**23,100**	**16,600**	**17,900**	**23,800**	**16,677**	**19,300**	**17,528**	**12,300**	**10,000**	**12,500**	**12,000**	**12,300**
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	554	588	571	545	618	649	659	767	801	888	642	41	783
Total Alkalinity as CaCO3	mg/L	1	-	-	544	588	571	545	618	649	659	767	801	888	642	41	783
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	1210	1560	953	870	1440	815	1100	860	637	578	443	9.2	804
Cations and Anions																	
Chloride	mg/L	1	-	-	163	7710	5990	5630	8700	4520	5330	991	3590	3130	2140	27	8280
Calcium	mg/L	1	-	-	66	89	47	39	98	35	48	23	25	20	13	16	125
Magnesium	mg/L	1	-	-	798	908	602	510	972	441	533	74	319	237	149	5.2	1110
Sodium	mg/L	1	-	-	3670	4200	3360	3060	4460	2890	3140	1010	2400	1900	1520	15	4740
Potassium	mg/L	1	-	-	25	32	26	23	32	22	24	20	20	16	14	3	38
Total Anions	meq/L	0.01	-	-	231	262	200	188	288	157	186	160	130	118	82.4	34	266
Total Cations	meq/L	0.01	-	-	229	263	199	178	280	164	183	138	132	104	79.4	23	305
Ionic Balance	%	0.01	-	-	0.36	0.18	0.38	2.79	1.42	2.14	0.8	7.5	0.71	6.55	1.87	0.45	6.8
Total Metals																	
Manganese	mg/L	0.001	1.9	-	**3.09**	**3.36**	**2.03**	1.65	**3.28**	**2.62**	**2.78**	**2.75**	**2.7**	**2.8**	1.83	**5**	**9.24**
Iron	mg/L	0.05	-	-	0.48	0.59	0.38	0.26	0.56	2.06	1.54	1.16	1.04	0.78	0.97	7	1.96
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	**2.8**	**3.62**	**2.09**	1.69	**3.21**	**2.68**	**2.74**	**2.48**	**3.05**	**1.95**	1.55	**5**	**10.5**
Iron	mg/L	0.05	-	-	<0.10	0.28	<0.05	0.27	0.56	1.65	1.43	0.54	1.02	0.61	0.59	10	<0.05
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.7	0.7	0.7	0.7	0.5	0.7	0.7	0.7	0.6	0.9	0.7	0.88	0.8
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	0.1	0.08	0.13	0.08	0.08	0.36	0.22	0.75	0.8	**2.68**	**2.75**	0.41	**0.98**
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**-**	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.03	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.47	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.03	**0.15**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.40**	<0.01
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	2	6	<1	4	<1	6	6	5	8	7	14	5.7	4
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																	
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<0.5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<0.5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<0.5

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<0.3	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<1	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.3	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	74	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	17	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4
				Sample Date	14/09/2022	12/12/2022	20/03/2023	9/06/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**				
pH								
pH Value	pH Unit	0.01	-	6.5 - 8.0	6.69	6.69	6.7	6
Electrical Conductivity								
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**8,621**	**8,621**	560	5973
Alkalinity								
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	840	948	41	932
Total Alkalinity as CaCO3	mg/L	1	-	-	840	948	41	932
Sulfate								
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	553	319	8	417
Cations and Anions								
Chloride	mg/L	1	-	-	3960	1800	27	2340
Calcium	mg/L	1	-	-	38	10	17	13
Magnesium	mg/L	1	-	-	350	123	3	168
Sodium	mg/L	1	-	-	2240	1400	9	1640
Potassium	mg/L	1	-	-	21	13	2	13
Total Anions	meq/L	0.01	-	-	140	76.4	1.75	93.3
Total Cations	meq/L	0.01	-	-	129	71.8	1.54	86.1
Ionic Balance	%	0.01	-	-	4.22	3.04	-	3.99
Total Metals								
Manganese	mg/L	0.001	1.9	-	1.82	1.45	0.001	2.48
Iron	mg/L	0.05	-	-	0.48	0.96	<0.05	0.84
Dissolved Metals								
Manganese	mg/L	0.001	1.9	-	1.86	1.26	<0.001	1.59
Iron	mg/L	0.05	-	-	<0.05	<0.05	<0.05	<0.05
Fluoride								
Fluoride	mg/L	0.1	-	-	0.6	0.7	1.1	<0.01
Nitrate, Nitrite & Ammonia								
Ammonia as N	mg/L	0.01	0.9	-	0.48	0.57	0.28	0.39
Nitrite as N	mg/L	0.01	-	-	<0.01	0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.03	<0.01	0.14	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.03	0.01	0.14	0.01
Total Organic Carbon								
Total Organic Carbon	mg/L	1	-	-	34	32	2	14
Monocyclic Aromatic Hydrocarbons								
Benzene	µg/L	1	950	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-
Napthalene								
Naphthalene	µg/L	7	16	-	-	-	-	-
Volitile Organic Compounds								
Vinyl Acetate	µg/L	50	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-
Fumigants								
2.2-Dichloropropane	µg/L	5	-	-	<0.5	<0.5	<0.5	<0.5
1.2-Dichloropropane	µg/L	5	900	-	<0.5	<0.5	<0.5	<0.5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<0.5	<0.5	<0.5	<0.5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<0.5	<0.5	<0.5	<0.5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<0.5	<0.5	<0.5	<0.5

				Sample ID	GW4	GW4	GW4	GW4
				Sample Date	14/09/2022	12/12/2022	20/03/2023	9/06/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**				
Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5
Halogenated Aromatic Compounds								
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5
Trihalomethanes								
Chloroform	µg/L	5	770	-	<5	<5	26	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5

Notes:

"-" Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0	8.00	8.76	8.12	7.94	7.99	7.62	7.93	8.00	7.99	7.45	7.76	7.99	8.05	7.82	7.57
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1560	1420	1150	1050	670	1060	2180	1120	670	599	848	942	859	713	479
Suspended Solids																			
Total Suspended Solids	mg/L	5	-	-	-	-	-	-	-	6	9	11	-	12	10	<5	8	24	<5
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	160	146	207	160	86	102	226	142	86	76	135	112	187	117	88
Total Alkalinity as CaCO3	mg/L	1	-	-	160	175	207	160	86	102	226	142	86	76	135	112	187	117	88
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	135	299	236	91	42	39	120	124	42	56	68	56	137	75	30
Cations and Anions																			
Chloride	mg/L	1	-	-	335	142	112	182	131	258	496	182	131	86	139	181	88	83	71
Calcium	mg/L	1	-	-	32	25	32	32	21	28	51	30	21	22	28	25	23	24	20
Magnesium	mg/L	1	-	-	31	18	24	25	14	23	53	22	14	11	17	18	17	14	11
Sodium	mg/L	1	-	-	261	280	189	156	86	159	365	167	86	90	133	128	139	95	64
Potassium	mg/L	1	-	-	6	6	7	4	4	4	7	5	4	4	5	4	4	5	3
Total Anions	meq/L	0.01	-	-	-	13.7	12.2	-	6.29	10.1	21	10.6	6.29	5.11	8.26	8.51	9.07	6.24	4.39
Total Cations	meq/L	0.01	-	-	-	15.1	12.0	-	6.04	10.3	23	10.7	6.04	6.02	8.71	8.40	8.70	6.61	4.76
Ionic Balance	%	0.01	-	-	-	4.60	1.01	-	2.00	0.87	4.43	0.67	2.00	8.16	2.67	0.67	2.14	2.86	4.12
Total Metals																			
Manganese	mg/L	0.001	1.9	-	0.084	0.055	0.154	0.668	0.082	0.056	0.128	0.088	0.082	0.059	0.004	0.071	0.043	0.205	0.266
Iron	mg/L	0.05	-	-	0.1	0.15	0.08	0.56	0.1	0.12	0.27	0.45	0.28	0.14	0.08	0.32	0.12	3.61	0.52
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-	0.107	0.103	0.127	0.085	0.065	0.006	0.168	0.066	0.065	0.208	0.069	0.063	0.053	0.136	0.078
Iron	mg/L	0.05	-	-	0.7	1.56	3.89	0.43	0.28	0.12	0.79	<0.05	0.1	0.51	0.3	0.12	0.52	0.25	0.14
Fluoride																			
Fluoride	mg/L	0.1	-	-	0.7	0.6	0.7	0.6	0.8	13	0.8	0.9	0.8	0.4	0.7	0.8	0.8	0.4	0.4
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-	0.16	0.22	0.18	0.13	0.26	<0.10	0.02	0.07	0.26	0.19	0.12	0.03	0.32	0.42	0.32
Nitrite as N	mg/L	0.01	-	-	0.02	1.32	0.05	0.02	0.09	0.02	<0.01	0.02	0.09	0.22	0.03	<0.01	0.02	0.01	0.04
Nitrate as N	mg/L	0.01	2.4	-	0.23	4.38	0.68	0.65	0.47	0.08	0.17	0.55	0.47	0.58	0.15	0.12	0.11	0.08	0.17
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.25	5.7	0.73	0.67	0.56	0.1	0.17	0.57	0.56	0.8	0.18	0.12	0.13	0.09	0.21
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-	9	11	5	13	9	8	25	8	9	22	6	6	5	9	11
Oil & Grease																			
Oil & Grease	mg/L	5	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																			
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
					Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																				
Naphthalene	µg/L	7	16	-		-	-	<7	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																				
Vinyl Acetate	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																				
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																				
Chlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																				
Chloroform	µg/L	5	-	-		<5	<5	<5	<5	<5	8	<5	6	20	20	6	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.83	7.48	8.13	7.98	7.78	7.92	7.26	7.45	7.71	7.43	7.61	7.57	7.3	7.74	7.58
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1080	449	1020	1370	933	1090	183	250	1190	764	1740	700	1950	991	1200
Suspended Solids																			
Total Suspended Solids	mg/L	5	-	-	<5	12	72	<5	54	13	137	40	15	15	25	54	114	16	55
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	181	78	145	185	132	233	34	45	169	998	246	115	1090	128	168
Total Alkalinity as CaCO3	mg/L	1	-	-	181	78	145	185	132	233	34	45	169	98	246	115	1090	128	168
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	50	16	30	78	114	64	11	23	99	34	75	77	31	71	110
Cations and Anions																			
Chloride	mg/L	1	-	-	202	63	221	321	138	182	21	34	205	134	346	125	134	208	226
Calcium	mg/L	1	-	-	29	19	27	36	48	31	9	11	41	30	54	22	219	35	40
Magnesium	mg/L	1	-	-	24	9	20	26	20	23	3	5	27	14	20	12	84	18	18
Sodium	mg/L	1	-	-	145	46	140	209	102	165	23	27	159	100	243	111	146	127	177
Potassium	mg/L	1	-	-	6	3	7	5	6	4	3	3	6	5	24	5	12	5	9
Total Anions	meq/L	0.01	-	-	10.4	3.67	9.76	104	-	11.1	1.5	2.34	11.2	6.44	4.44	7.43	26.2	9.9	12
Total Cations	meq/L	0.01	-	-	9.88	3.77	9.26	123	-	10.7	1.77	2.21	11.3	7.13	4.08	7.04	24.5	8.88	11.4
Ionic Balance	%	0.01	-	-	2.35	1.31	2.61	8.57	-	1.87	-	-	0.52	5.02	4.23	2.66	3.36	5.45	2.63
Total Metals																			
Manganese	mg/L	0.001	1.9	-	1.52	0.131	0.226	0.092	0.099	0.107	0.065	0.043	0.111	0.236	0.102	0.174	0.151	0.12	0.154
Iron	mg/L	0.05	-	-	1.52	0.66	0.5	0.25	3.2	0.6	2.03	1.9	0.63	0.6	0.24	0.57	1.66	0.46	1.84
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-	0.089	0.136	0.202	0.094	0.062	0.092	0.024	0.019	0.093	0.175	0.0088	0.119	-	0.007	0.130
Iron	mg/L	0.05	-	-	0.11	0.22	0.38	0.12	0.16	0.17	0.13	0.32	0.13	0.31	0.16	0.23	-	<0.05	0.16
Fluoride																			
Fluoride	mg/L	0.1	-	-	0.9	0.5	0.8	0.8	0.4	0.8	0.2	0.2	0.6	1.1	0.9	0.4	0.3	0.7	0.8
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-	0.75	0.49	3.09	2.11	0.35	0.6	0.68	0.09	0.33	1.12	9.01	1.33	1.02	0.25	2.95
Nitrite as N	mg/L	0.01	-	-	0.12	0.05	<0.01	0.01	0.07	0.05	0.07	0.4	0.07	<0.01	<0.01	0.03	0.01	0.04	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.33	0.16	0.03	0.07	0.85	0.17	0.7	0.03	0.66	<0.01	<0.01	<0.01	-	0.03	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.45	0.21	0.03	0.08	0.92	0.22	0.01	0.43	0.73	<0.01	<0.01	0.02	-	0.07	<0.01
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-	10	10	17	11	12	9	14	11	9	28	14	9	11	8	20
Oil & Grease																			
Oil & Grease	mg/L	5	-	-	8	<5	8	<5	<5	6	10	<5	<5	<5	7	<5	<5	<5	<5
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																			
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene					-	-	-	-	-	-	-	-	-	-	-				
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																			
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																			
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																			
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																			
Chloroform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.41	7.71	7.19	7.83	7.91	7.69	8.4	6.95	7.7	7.3	7.72	7.22	7.23		7.82
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	953	948	68	2530	1180	819	968	431	692	727	705	675	660		1420
Suspended Solids																			
Total Suspended Solids	mg/L	5	-	-	56	42	69	42	86	<5	10	14	18	14	8	9	3	5	
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	125	133	17	292	198	157	163	94	164	150	96	92	35	232	246
Total Alkalinity as CaCO3	mg/L	1	-	-	125	133	17	292	198	157	163	94	164	150	96	92	35	232	246
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	62	91	6	81	137	70	81	30	57	70	29	44	9.1	90	98
Cations and Anions																			
Chloride	mg/L	1	-	-	190	163	4	645	168	119	222	58	101	102	52	50	26	312	384
Calcium	mg/L	1	-	-	29	28	5	52	36	29	28	22	23	26	16	15	14	39	49
Magnesium	mg/L	1	-	-	16	16	<1	40	22	18	22	8	14	15	7	7	4.9	37	42
Sodium	mg/L	1	-	-	135	130	4	401	159	112	169	53	104	96	47	59	15	223	244
Potassium	mg/L	1	-	-	5	3	1	22	6	4	5	4	5	4	3	3	3.2	6	7
Total Anions	meq/L	0.01	-	-	9.15	9.15	0.58	25.7	11.5	7.95	11.2	4.14	7.31	7.33	3.99	4.16	-	15.3	17.8
Total Cations	meq/L	0.01	-	-	8.76	8.52	0.45	23.9	10.7	7.9	10.7	4.16	6.95	6.81	3.5	3.97	-	14.8	16.7
Ionic Balance	%	0.01	-	-	2.14	3.55	-	3.68	3.92	0.31	2.37	0.3	2.53	3.39	-	2.42	-	1.54	3.17
Total Metals																			
Manganese	mg/L	0.001	1.9	-	0.1.4	0.069	0.054	0.200	0.280	0.047	0.111	0.076	0.056	0.043	0.036	0.049	54	0.074	0.257
Iron	mg/L	0.05	-	-	0.95	0.31	2.52	0.23	2.16	0.29	0.5	0.24	0.38	0.15	0.46	0.32	1.1	0.3	0.62
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-	0.109	0.019	0.020	0.158	0.025	0.042	0.054	0.081	0.062	0.040	0.040	0.042	10	<0.001	0.001
Iron	mg/L	0.05	-	-	0.11	0.14	0.2	0.12	0.18	0.11	0.06	0.48	0.12	0.14	0.1	0.14	0.022	<0.05	<0.05
Fluoride																			
Fluoride	mg/L	0.1	-	-	0.3	0.5	0.1	1.9	0.5	0.4	0.8	0.3	0.4	0.3	0.3	0.3	0.81	0.7	0.7
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-	1.20	0.46	0.08	8.67	0.46	0.10	0.39	0.10	0.15	0.18	0.06	0.09	0.44	0.3	0.34
Nitrite as N	mg/L	0.01	-	-	0.07	<0.01	0.01	<0.01	0.08	0.02	0.03	0.04	0.04	0.04	<0.01	0.02	0.30	0.11	0.05
Nitrate as N	mg/L	0.01	2.4	-	0.04	0.09	0.21	<0.01	0.23	0.39	0.17	0.23	0.34	1	0.31	0.28	0.1	0.63	2.2
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.11	0.09	0.22	<0.01	0.31	0.41	0.2	0.27	0.38	1.04	0.31	0.3	**0.4**	**0.74**	**2.25**
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-	13	8	3	27	10	10	8	7	7	2	5	6	7.4	17	19
Oil & Grease																			
Oil & Grease	mg/L	5	-	-	<5	<5	<5	5	<5	<5	<5	<5	6	<5	<5	<5	<5	<5	<5
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																			
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
					Sample Date	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Napthalene																				
Naphthalene	µg/L	7	16	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																				
Vinyl Acetate	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																				
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50	<50
Vinyl chloride	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<0.3	<50	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<1	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0..5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Trichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Halogenated Aromatic Compounds																				
Chlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.3	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Trihalomethanes																				
Chloroform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	68	<5	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1
				Sample Date	12/12/2022	14/03/2023	9/06/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**			
pH							
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.22	8.06	6.63
Electrical Conductivity							
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	675	835	411
Suspended Solids							
Total Suspended Solids	mg/L	5	-	-	9	9	271
Alkalinity							
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	90	159	109
Total Alkalinity as CaCO3	mg/L	1	-	-	90	159	109
Sulfate							
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	44	42	25
Cations and Anions							
Chloride	mg/L	1	-	-	55	164	75
Calcium	mg/L	1	-	-	15	27	23
Magnesium	mg/L	1	-	-	7	18	12
Sodium	mg/L	1	-	-	59	101	49
Potassium	mg/L	1	-	-	2	5	3
Total Anions	meq/L	0.01	-	-	4.16	8.68	4.81
Total Cations	meq/L	0.01	-	-	3.17	7.94	4.34
Ionic Balance	%	0.01	-	-	2.42	4.45	5.14
Total Metals							
Manganese	mg/L	0.001	1.9	-	0.049	0.055	0.091
Iron	mg/L	0.05	-	-	0.32	0.29	0.52
Dissolved Metals							
Manganese	mg/L	0.001	1.9	-	0.042	0.002	0.019
Iron	mg/L	0.05	-	-	0.14	0.07	0.07
Fluoride							
Fluoride	mg/L	0.1	-	-	0.3	0.5	<0.1
Nitrate, Nitrite & Ammonia							
Ammonia as N	mg/L	0.01	0.9	-	0.09	8.28	0.3
Nitrite as N	mg/L	0.01	-	-	0.02	0.18	0.06
Nitrate as N	mg/L	0.01	2.4	-	0.28	0.19	0.1
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.3**	**0.37**	**0.16**
Total Organic Carbon							
Total Organic Carbon	mg/L	1	-	-		17	10
Oil & Grease							
Oil & Grease	mg/L	5	-	-		<5	<5
Monocyclic Aromatic Hydrocarbons							
Benzene	µg/L	1	950	-		-	-
Toluene	µg/L	2	-	-		-	-
Ethylbenzene	µg/L	2	-	-		-	-
meta- & para-Xylene	µg/L	2	75	-		-	-
Styrene	µg/L	5	-	-		-	-
ortho-Xylene	µg/L	2	350	-		-	-
Isopropylbenzene	µg/L	5	-	-		-	-
n-Propylbenzene	µg/L	5	-	-		-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-		-	-
sec-Butylbenzene	µg/L	5	-	-		-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-		-	-
tert-Butylbenzene	µg/L	5	-	-		-	-
p-Isopropyltoluene	µg/L	5	-	-		-	-
n-Butylbenzene	µg/L	5	-	-		-	-
Fumigants							
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1
				Sample Date	12/12/2022	14/03/2023	9/06/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**			
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5
Napthalene							
Naphthalene	µg/L	7	16	-	-	-	-
Monocyclic Aromatic Hydrocarbons							
Vinyl Acetate	µg/L	50	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-
Halogenated Aliphatic Compounds							
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5
Halogenated Aromatic Compounds							
Chlorobenzene	µg/L	5	-	-	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5
Trihalomethanes							
Chloroform	µg/L	5	-	-	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.39	7.54	7.37	7.42	7.9	7.25	7.41	7.39	7.9	7.51	7.02	7.32	7.31	7.51	7.27
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	301	357	538	588	835	412	551	406	835	433	264	380	389	267	362
Suspended Solids																			
Total Suspended Solids	mg/L	5	-	-	-	-	-	-	-	161	34	30	-	38	42	<5	70	22	28
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	78	82	141	163	185	94	165	89	185	108	66	82	70	65	78
Total Alkalinity as CaCO3	mg/L	1	-	-	78	82	141	163	185	94	165	89	185	108	66	82	70	65	78
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	20	31	14	31	28	18	<1	8	28	5	6	5	20	8	12
Cations and Anions																			
Chloride	mg/L	1	-	-	71	37	81	65	134	56	70	59	134	54	34	60	61	27	53
Calcium	mg/L	1	-	-	22	22	30	31	41	25	36	22	41	19	16	17	17	19	21
Magnesium	mg/L	1	-	-	9	7	12	13	18	9	13	8	18	9	5	7	7	6	7
Sodium	mg/L	1	-	-	51	38	63	65	96	40	54	38	96	43	30	40	47	24	42
Potassium	mg/L	1	-	-	4	4	7	6	7	4	5	3	7	4	3	3	3	2	4
Total Anions	meq/L	0.01	-	-	-	3.33	5.39	-	8.06	3.83	5.27		8.06		2.4	3.43	3.54	2.23	3.30
Total Cations	meq/L	0.01	-	-	-	3.43	5.4	-	7.88	3.83	5.34		7.88		2.59	3.29	3.55	2.54	3.55
Ionic Balance	%	0.01	-	-	-	1.5	0.09	-	1.12	0.03	0.07		1.12	1.67		2.11	0.13	-	3.64
Total Metals																			
Manganese	mg/L	0.001	1.9	-	0.149	0.213	1.56	0.141	0.783	27.2	0.38	0.722	0.783	0.325	<0.001	0.488	0.223	0.532	2.65
Iron	mg/L	0.05	-	-	0.18	0.32	1.69	0.25	0.56	45	0.33	2.96	0.56	0.79	0.12	2.34	0.32	3.00	15.5
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-	0.21	0.298	1.93	1.07	0.731	0.227	10.4	0.318	0.731	0.936	0.509	0.461	0.302	0.302	0.004
Iron	mg/L	0.05	-	-	0.5	1.19	2.33	1.7	0.29	0.6	21.9	0.31	0.29	5.11	2.32	1.67	1.07	1.19	0.18
Fluoride																			
Fluoride	mg/L	0.1	-	-	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-	0.03	0.02	0.16	0.22	0.12	0.44	0.4	0.32	0.12	0.12	0.07	0.82	0.14	0.03	0.02
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.03	0.1	0.02	0.01	0.02	0.02	0.02	0.01	0.03	0.03	0.03	0.23	0.02	0.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	0.03	0.1	0.02	0.01	0.03	0.02	0.02	0.01	0.03	0.03	0.03	0.27	0.02	0.02
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-	10	8	49	18	14	45	20	12	14	17	7	11	21	10	46
Oil & Grease																			
Oil & Grease	mg/L	5	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	94	<5	<5
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																			
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
					Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																				
Naphthalene	µg/L	7	16	-		-	-	<7	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																				
Vinyl Acetate	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																				
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																				
Chlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																				
Chloroform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	20	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.36	7.28	7.89	7.2	7.6	7.54	7.06	7.47	7.48	7.07	7.29	7.2	7.13	6.89	7.1
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	542	592	481	494	1400	799	281	449	742	738	448	308	256	225	264
Suspended Solids																			
Total Suspended Solids	mg/L	5	-	-	8	83	142	64	1980	734	10	22	9	245	742	38	16	18	29
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	158	121	98	135	178	235	43	74	181	124	129	86	81	35	76
Total Alkalinity as CaCO3	mg/L	1	-	-	158	121	98	135	178	235	43	74	181	124	129	86	81	35	76
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	12	17	27	4	222	8	21	70	27	5	3	5	2	26	7
Cations and Anions																			
Chloride	mg/L	1	-	-	64	84	70	62	216	118	40	46	83	125	64	50	36	24	38
Calcium	mg/L	1	-	-	30	33	29	30	82	44	14	24	42	34	22	18	16	15	17
Magnesium	mg/L	1	-	-	10	11	10	8	26	16	6	6	14	15	9	6	6	4	5
Sodium	mg/L	1	-	-	63	60	46	58	156	100	32	50	84	87	47	34	28	18	31
Potassium	mg/L	1	-	-	4	5	3	4	7	5	3	9	7	4	3	2	3	3	3
Total Anions	meq/L	0.01	-	-	5.21	5.14	4.49	14.4	-	8.19	2.42	4.23	6.52	6.11	4.44	3.23	2.68	1.92	2.74
Total Cations	meq/L	0.01	-	-	5.16	5.29	4.35	13.2	-	7.99	2.66	4.1	7.08	6.82	4.08	2.92	2.59	1.94	2.68
Ionic Balance	%	0.01	-	-	0.49	1.42	1.66	4.45	-	1.25	-	1.64	4.12	5.49	4.23	5.05	-	-	-
Total Metals																			
Manganese	mg/L	0.001	1.9	-	0.95	0.838	0.37	0.792	3.16	1.21	0.168	0.035	0.922	0.738	0.394	0.465	0.319	0.21	0.289
Iron	mg/L	0.05	-	-	1.66	2.26	0.87	8.4	192	6.85	0.88	0.87	2.2	9.21	11	4.13	3.04	2.61	1.13
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-	0.678	0.114	0.347	0.62	1.68	1.11	0.163	0.009	0.863	0.655	0.36	0.411	-	0.18	0.231
Iron	mg/L	0.05	-	-	0.62	1	0.29	2.32	1.48	2.94	0.53	0.12	0.91	5.45	2.23	1	-	0.95	0.14
Fluoride																			
Fluoride	mg/L	0.1	-	-	0.2	0.3	0.2	0.2	0.2	0.6	0.9	0.3	0.4	1.2	0.9	0.5	0.5	0.3	0.4
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-	0.08	<0.01	0.17	0.55	<0.10	0.24	0.12	0.02	0.22	0.46	1.65	0.03	0.52	0.36	0.06
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.55	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	<0.01	0.08	0.02	<0.50	0.01	0.05	0.04	0.05	<0.01	<0.01	<0.01	-	0.02	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.02	<0.01	0.08	0.02	<0.50	0.01	0.06	0.59	0.05	<0.01	<0.01	<0.01	-	0.02	<0.01
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-	11	20	16	42	32	25	13	7	8	70	14	24	13	11	14
Oil & Grease																			
Oil & Grease	mg/L	5	-	-	7	15	9	33	<5	9	5	6	<5	5	7	9	<5	<5	<5
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																			
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																			
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																			
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																			
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																			
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																			
Chloroform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
pH																		
pH Value	pH Unit	0.01	-	6.5 - 8.0	6.92	7.05	6.5	7.39	7.26	6.77	7.17	6.67	6.82	6.49	7.26	7.03	7	
Electrical Conductivity																		
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	296	289	73	473	395	396	422	280	412.9	180	221	305	300	
Suspended Solids																		
Total Suspended Solids	mg/L	5	-	-	161	<5	62	68	16	9	34	16	33	36	31	25	20	100
Alkalinity																		
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	77	42	15	101	96	102	134	92	100	73	58	88	40	230
Total Alkalinity as CaCO3	mg/L	1	-	-	77	42	15	101	96	102	134	92	100	73	58	88	40	230
Sulfate																		
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	6	40	5	15	6	2	8	12	8	8	17	18	9.1	15
Cations and Anions																		
Chloride	mg/L	1	-	-	42	36	7	69	45	60	65	33	48	21	26	35	26	82
Calcium	mg/L	1	-	-	20	17	4	25	17	18	23	19	20	12	10	19	16	32
Magnesium	mg/L	1	-	-	60	5	1	7	6	6	8	6	6	3	3	6	5.3	16
Sodium	mg/L	1	-	-	34	29	8	56	46	51	63	30	40	21	26	37	15	87
Potassium	mg/L	1	-	-	2	3	2	4	6	4	6	4	4	2	2	5	2.9	7
Total Anions	meq/L	0.01	-	-	2.85	2.69	0.6	4.28	3.31	3.77	4.68	3.02	3.52	2.22	2.25	3.12	-	7.22
Total Cations	meq/L	0.01	-	-	3.02	2.6	0.68	4.36	3.5	3.71	4.7	2.85	3.33	1.81	1.93	3.18	-	6.88
Ionic Balance	%	0.01	-	-	2.96	-	-	0.98	2.7	0.79	0.24	2.89	2.69	-	-	0.93	-	2.44
Total Metals																		
Manganese	mg/L	0.001	1.9	-	0.369	0.239	0.22	0.375	0.213	0.212	0.312	0.213	0.273	0.083	0.063	0.164	15	0.343
Iron	mg/L	0.05	-	-	4.68	1.68	0.76	2.6	3.22	5.45	1.58	1.19	1.36	76	0.6	1.04	0.23	0.82
Dissolved Metals																		
Manganese	mg/L	0.001	1.9	-	0.343	0.218	0.013	0.245	0.212	0.191	0.3	0.217	0.242	0.08	0.061	0.161	9	0.317
Iron	mg/L	0.05	-	-	0.98	0.8	0.1	0.24	1.09	4.88	1.03	0.86	1.44	0.3	0.13	0.42	<5	0.48
Fluoride																		
Fluoride	mg/L	0.1	-	-	0.3	0.1	0.2	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.88	0.2
Nitrate, Nitrite & Ammonia																		
Ammonia as N	mg/L	0.01	0.9	-	0.21	0.62	0.06	0.03	0.44	0.36	0.07	0.04	0.2	0.08	<0.01	<0.01	0.39	0.88
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	<0.01	0.23	<0.01	0.3	<0.01	<0.01	<0.01	<0.01	0.02	0.17	0.02	0.1	0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.02	<0.01	0.23	<0.01	0.3	<0.01	<0.01	<0.01	<0.01	0.03	0.19	0.02	0.1	0.01
Total Organic Carbon																		
Total Organic Carbon	mg/L	1	-	-	16	8	14	24	15	30	33	22	54	5	17	28	5	38
Oil & Grease																		
Oil & Grease	mg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	211	<5	<5	10	<5	15
Monocyclic Aromatic Hydrocarbons																		
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																		
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
					Sample Date	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Napthalene																			
Naphthalene	µg/L	7	16	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																			
Vinyl Acetate	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																			
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50
Vinyl chloride	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<0.3	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<1	<50
1.1-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	21	<5	<5	<5	<5	<0.5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0..5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Carbon Tetrachloride	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Trichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Tetrachloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Halogenated Aromatic Compounds																			
Chlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.3	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Trihalomethanes																			
Chloroform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	71	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	16	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2
				Sample Date	14/09/2022	12/12/2022	14/03/2023	9/06/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**				
pH								
pH Value	pH Unit	0.01	-	6.5 - 8.0	6.53	6.55	4.88	4.82
Electrical Conductivity								
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	613	656	470	539
Suspended Solids								
Total Suspended Solids	mg/L	5	-	-		34	307	280
Alkalinity								
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	124	50	53	122
Total Alkalinity as CaCO3	mg/L	1	-	-	124	50	53	122
Sulfate								
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	13	74	<1	24
Cations and Anions								
Chloride	mg/L	1	-	-	51	42	52	129
Calcium	mg/L	1	-	-	23	22	32	29
Magnesium	mg/L	1	-	-	12	8	10	11
Sodium	mg/L	1	-	-	42	44	46	89
Potassium	mg/L	1	-	-	4	4	6	11
Total Anions	meq/L	0.01	-	-	4.19	3.72	2.52	6.58
Total Cations	meq/L	0.01	-	-	4.06	3.77	4.57	6.5
Ionic Balance	%	0.01	-	-	1.48	0.64	28.8	0.54
Total Metals								
Manganese	mg/L	0.001	1.9	-	0.331	0.078	0.37	0.419
Iron	mg/L	0.05	-	-	10.1	0.68	14	16.5
Dissolved Metals								
Manganese	mg/L	0.001	1.9	-	0.206	0.078	0.402	0.397
Iron	mg/L	0.05	-	-	0.68	0.68	13	16.6
Fluoride								
Fluoride	mg/L	0.1	-	-	0.3	0.2	0.2	<0.1
Nitrate, Nitrite & Ammonia								
Ammonia as N	mg/L	0.01	0.9	-	0.46	0.28	0.54	0.45
Nitrite as N	mg/L	0.01	-	-	<0.01	0.19	0.06	0.20
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.35	1.1	0.43
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	0.54	1.16	0.63
Total Organic Carbon								
Total Organic Carbon	mg/L	1	-	-	28	27	183	1940
Oil & Grease								
Oil & Grease	mg/L	5	-	-	107	10	7	214
Monocyclic Aromatic Hydrocarbons								
Benzene	µg/L	1	950	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-
Fumigants								
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2
					Sample Date	14/09/2022	12/12/2022	14/03/2023	9/06/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**				
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5
Napthalene								
Naphthalene	µg/L	7	16	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons								
Vinyl Acetate	µg/L	50	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-
Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	45	45	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5
Halogenated Aromatic Compounds								
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5
Trihalomethanes								
Chloroform	µg/L	5	-	-	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5

Notes:

"-" - Not analysed

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG1	14/10/2011	1.9	33	0.6	10	2.5	43
DDG1	15/11/2011	1.9	36	2.2	41	**4.1**	77
DDG1	16/12/2011	1.4	25	0.3	6	1.7	31
DDG1	16/01/2012	1.7	31	0.5	10	2.2	41
DDG1	14/02/2012	0.9	15	0.2	3	1.1	18
DDG1	16/03/2012	1.2	22	0.6	11	1.8	33
DDG1	16/04/2012	1.8	33	0.3	5	2.1	38
DDG1	16/05/2012	0.9	17	0.6	11	1.5	28
DDG1	14/06/2012	1.6	27	0.1	1	1.7	28
DDG1	13/07/2012	1.1	18	0.4	6	1.5	24
DDG1	16/08/2012	0.4	8	0.3	6	0.7	14
DDG1	18/09/2012	1.6	30	0.6	11	2.2	41
DDG1	18/10/2012	1.9	35	0.5	8	2.4	43
DDG1	15/11/2012	1.5	21	0.6	11	2.1	35
DDG1	18/12/2012	2.3	45	0.9	17	3.2	62
DDG1	15/01/2013	2.4	39	0.3	6	2.7	45
DDG1	13/02/2013	2.4	41	0.4	6	2.8	47
DDG1	18/03/2013	1.6	31	0.6	11	2.2	42
DDG1	17/04/2013	1.2	21	1.0	17	2.2	38
DDG1	17/05/2013	0.8	15	1.5	25	2.3	40
DDG1	17/06/2013	1.6	30	0.3	4	1.9	34
DDG1	16/07/2013	0.9	16	0.3	4	1.2	20
DDG1	14/08/2013	0.9	15	0.2	3	1.1	18
DDG1	17/09/2013	1.6	30	0.6	11	2.2	41
DDG1	17/10/2013	1.4	26	0.4	7	1.8	32
DDG1	14/11/2013	2.8	47	0.5	8	3.3	55
DDG1	16/12/2013	2.7	50	0.4	9	3.1	59
DDG1	13/01/2014	1.0	17	0.2	2	1.2	19
DDG1	11/02/2014	1.0	18	<0.1	<1	1.0	18
DDG1	14/03/2014	3.1	57	1.8	32	**4.9**	89
DDG1	14/04/2014	3.0	54	0.8	15	3.8	69
DDG1	16/05/2014	1.1	20	0.7	14	1.8	34
DDG1	16/06/2014	1.1	27	0.3	6	1.8	33
DDG1	14/07/2014	0.7	11	0.2	4	0.9	15
DDG1	14/08/2014	0.8	15	0.5	8	1.3	23
DDG1	16/09/2014	0.9	18	0.5	9	1.4	27
DDG1	17/10/2014	1.3	23	0.4	8	1.7	31
DDG1	14/11/2014	1.5	24	0.6	11	2.1	35
DDG1	16/12/2014	1.9	36	0.8	14	2.7	50
DDG1	15/01/2015	0.8	14	0.5	9	1.3	23
DDG1	13/02/2015	1.2	21	0.6	10	1.8	31
DDG1	16/03/2015	1.8	33	0.9	17	2.7	50
DDG1	14/04/2015	1.5	25	0.4	7	1.9	32
DDG1	14/05/2015	1.4	24	0.7	13	2.1	37
DDG1	15/06/2015	1.9	35	0.6	12	2.5	47
DDG1	15/07/2015	3.2	56	0.9	17	**4.1**	73
DDG1	14/08/2015	0.7	12	0.1	2	0.8	14
DDG1	15/09/2015	1.9	36	0.6	12	2.5	48
DDG1	14/10/2015	1.9	32	0.4	7	2.3	39
DDG1	13/11/2015	1.4	24	0.7	13	2.1	37
DDG1	11/12/2015	1.6	26	0.6	10	2.2	36
DDG1	16/01/2016	1.5	31	0.4	10	1.9	41
DDG1	17/02/2016	1.0	19	0.2	4	1.2	23
DDG1	17/03/2016	3.0	51	1.3	22	**4.3**	73
DDG1	15/04/2016	1.0	17	0.4	7	1.4	24
DDG1	16/05/2016	1.2	22	0.4	8	1.6	30
DDG1	15/06/2016	1.8	31	0.5	10	2.3	41
DDG1	14/07/2016	1.8	30	0.4	8	2.2	38
DDG1	15/08/2016	0.8	16	0.4	6	1.2	22
DDG1	15/09/2016	1.9	34	0.5	10	2.4	44
DDG1	25/10/2016	1.1	27	0.6	12	1.7	39
DDG1	14/11/2016	1.0	12	0.4	5	1.4	17
DDG1	15/12/2016	1.8	32	0.7	14	2.5	46
DDG1	16/01/2016	1.1	21	0.7	12	1.8	33
DDG1	15/02/2017	2.1	37	0.7	12	2.8	49

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG1	15/03/2017	2.5	41	0.8	13	3.3	54
DDG1	13/04/2017	0.8	13	0.3	5	1.1	18
DDG1	15/05/2017	0.2	3	<0.1	1	0.2	4
DDG1	15/06/2017	1.5	27	0.4	8	1.9	36
DDG1	14/07/2017	1.8	31	0.4	7	2.2	38
DDG1	15/08/2017	2.2	41	0.5	10	2.7	51
DDG1	15/09/2017	1.1	20	0.2	3	1.3	23
DDG1	13/10/2017	1.7	28	0.4	7	2.1	35
DDG1	15/11/2017	1.5	30	0.5	8	2.0	38
DDG1	15/12/2017	2.4	43	0.5	9	2.9	52
DDG1	15/01/2018	1.3	24	0.5	8	1.8	32
DDG1	16/02/2018	2.7	50	0.5	10	3.2	60
DDG1	15/03/2018	1.9	31	1.4	21	3.3	52
DDG1	16/04/2018	1.8	34	0.5	10	2.3	44
DDG1	14/05/2018	1.6	26	0.3	5	1.9	31
DDG1	15/06/2018	1.5	28	0.4	7	1.9	35
DDG1	16/07/2018	1.1	20	0.4	8	1.5	28
DDG1	16/08/2018	1.0	17	0.2	5	1.2	22
DDG1	13/09/2018	2.2	37	0.7	12	2.9	49
DDG1	15/10/2018	1.7	32	0.5	9	2.2	41
DDG1	15/11/2018	1.3	24	0.6	10	1.9	34
DDG1	13/12/2018	1.4	23	0.4	5	1.8	28
DDG1	14/01/2019	2.3	43	0.8	16	3.1	59
DDG1	15/02/2019	2.2	42	0.6	11	2.8	53
DDG1	14/03/2019	2.3	37	0.5	7	2.8	44
DDG1	16/04/2019	1.1	20	0.5	11	1.6	31
DDG1	14/05/2019	1.0	17	0.2	4	1.2	21
DDG1	13/06/2019	1.0	18	0.5	8	1.5	26
DDG1	15/07/2019	1.4	28	0.4	8	1.8	34
DDG1	14/08/2019	0.3	5	0.2	3	0.5	8
DDG1	17/09/2019	1.8	37	0.8	16	2.6	53
DDG1	14/10/2019	1.3	21	0.5	8	1.8	29
DDG1	14/11/2019	1.4	26	0.6	11	2.0	37
DDG1	16/12/2019	6.8	129	2.5	46	**9.3**	175
DDG1	15/01/2020	3.6	64	0.9	16	**4.5**	80
DDG1	14/02/2020	4.8	84	1.0	1.9	**5.8**	103
DDG1	16/03/2020	1.0	18	0.7	13	1.7	31
DDG1	16/04/2020	0.9	16	0.7	12	1.6	28
DDG1	14/05/2020	0.7	12	0.6	10	1.3	22
DDG1	16/06/2020	1.3	25	0.6	11	1.9	36
DDG1	15/07/2020	1.2	20	0.5	9	1.7	29
DDG1	17/08/2020	0.6	12	0.5	9	1.1	21
DDG1	15/09/2020	1.2	21	0.8	13	2.0	34
DDG1	16/10/2020	0.8	14	0.7	14	1.5	28
DDG1	13/11/2020	Location removed at the time of sampling.					
DDG1	17/12/2020	New dust gauge installed.					
DDG1	14/01/2021	1.0	16	0.8	13	1.8	29
DDG1	15/02/2021	1.5	28	0.5	9	2.0	37
DDG1	11/03/2021	2.4	34	0.6	8	3.0	42
DDG1	15/04/2021	0.3	7	0.3	6	0.6	13
DDG1	19/05/2021	1.8	37	0.7	14	2.6	51
DDG1	11/06/2021	3.0	40	1.1	16	**4.1**	56
DDG1	15/07/2021	2.5	51	0.7	13	3.2	64
DDG1	12/08/2021	1.2	20	0.4	7	1.6	27
DDG1	14/09/2021	1.8	31	0.6	12	2.4	43
DDG1	15/10/2021	1.8	33	0.8	14	2.6	47
DDG1	12/11/2021	1.4	23	0.8	14	2.2	37
DDG1	16/12/2021	1.5	31	0.6	11	2.1	42
DDG1	14/01/2022	1	17	0.4	7	1.4	24
DDG1	16/02/2022	1.4	27	0.7	13	2.1	40
DDG1	17/03/2022	1	17	0.3	6	1.3	23
DDG1	14/04/2022	0.2	3	0.3	6	0.5	9
DDG1	13/05/2022	0.2	3	<0.1	<2	0.2	4
DDG1	15/06/2022	0.2	3	<0.1	<2	0.2	3

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG1	18/07/2022	0.2	4	<0.1	<2	0.2	4
DDG1	17/08/2022	2.7	47	0.6	12	3.3	59
DDG1	14/09/2022	2.3	38	0.6	10	2.9	48
DDG1	12/10/2022	1.8	30	1.2	19	3.0	49
DDG1	18/11/2022	0.1	2	<0.1	<2	0.1	2
DDG1	12/12/2022	2.1	30	0.7	10	2.8	40
DDG1	13/01/2023	0.1	2	<0.1	<2	0.1	2
DDG1	17/02/2023	0.9	19	0.3	5	1.2	24
DDG1	14/03/2023	1.2	17	0.4	7	1.6	24
DDG1	14/04/2023	2.3	42	0.8	15	3.1	57
DDG1	17/05/2023	2.1	40	0.9	19	3.0	59
DDG1	09/06/2023	1.2	16	0.3	4	1.5	20
DDG1	10/07/2023	1.9	34	0.5	9	2.4	43
DDG1	15/08/2023	2.7	57	1.1	24	3.8	81

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	14/10/2011	1.3	23	0.6	10	1.9	33
DDG2	15/11/2011	1.4	27	0.6	11	2.0	38
DDG2	16/12/2011	0.4	7	<0.1	1	0.4	8
DDG2	16/01/2012	0.7	14	0.3	4	1.0	18
DDG2	14/02/2012	0.5	8	<0.1	1	0.5	9
DDG2	16/03/2012	0.7	13	0.4	7	1.1	20
DDG2	16/04/2012	1.1	20	0.3	5	1.4	25
DDG2	16/05/2012	0.8	14	0.2	5	1.0	19
DDG2	14/06/2012	2.0	33	0.2	4	2.2	37
DDG2	13/07/2012	1.1	18	0.2	3	1.3	21
DDG2	16/08/2012	0.8	16	0.4	8	1.2	24
DDG2	18/09/2012	3.0	57	0.8	15	3.8	72
DDG2	18/10/2012	2.6	47	0.6	11	3.2	58
DDG2	15/11/2012	1.3	22	0.4	6	1.7	28
DDG2	20/12/2012	1.3	26	0.5	9	1.8	35
DDG2	15/01/2013	1.4	23	0.4	7	1.8	30
DDG2	13/02/2013	0.9	16	0.3	5	1.2	21
DDG2	18/03/2013	0.5	9	0.3	7	0.9	16
DDG2	17/04/2013	1.4	24	0.6	12	2.0	36
DDG2	17/05/2013	1.4	25	0.6	11	2.0	36
DDG2	17/06/2013	1.4	26	0.2	3	1.6	29
DDG2	16/07/2013	0.7	12	0.1	1	0.8	13
DDG2	14/08/2013	0.9	16	0.2	2	1.1	18
DDG2	17/09/2013	3.0	57	0.8	15	3.8	72
DDG2	17/10/2013	4.4	81	0.9	15	**5.3**	96
DDG2	14/11/2013	6.3	104	0.9	15	**7.7**	127
DDG2	16/12/2013	3.2	61	0.4	6	3.6	67
DDG2	13/01/2014	1.2	20	0.2	3	1.4	23
DDG2	11/02/2014	1.3	23	0.1	2	1.4	25
DDG2	14/03/2014	2.4	44	1.1	19	3.5	63
DDG2	14/04/2014	1.5	27	0.5	10	2.0	37
DDG2	16/05/2014	1.1	21	0.3	6	1.4	27
DDG2	16/06/2014	3.1	56	0.2	5	3.3	61
DDG2	14/07/2014	2.2	37	0.3	5	2.5	42
DDG2	14/08/2014	4.7	85	1.1	20	**5.8**	105
DDG2	16/09/2014	1.8	35	0.6	12	2.4	47
DDG2	17/10/2014	3.9	71	1.0	19	**4.9**	90
DDG2	14/11/2014	2.1	34	0.7	13	2.8	47
DDG2	16/12/2014	4.7	88	1.2	23	**5.9**	111
DDG2	15/01/2015	1.1	20	0.4	6	1.5	26
DDG2	13/02/2015	1.8	31	0.4	7	2.2	38
DDG2	16/03/2015	6.6	121	9.0	164	**15.6**	285
DDG2	14/04/2015	5.2	88	0.7	12	**5.9**	100
DDG2	14/05/2015	5.0	88	0.9	16	**5.9**	104
DDG2	15/06/2015	2.1	40	0.6	10	2.7	50
DDG2	15/07/2015	7.4	131	0.7	13	**8.1**	144
DDG2	14/08/2015	3.5	62	0.4	7	3.9	69
DDG2	15/09/2015	11.1	210	1.7	32	**12.8**	242
DDG2	14/10/2015	8.3	142	1.5	25	**9.8**	167
DDG2	13/11/2015	4.4	78	1.2	21	**5.6**	99
DDG2	11/12/2015	4.1	67	0.9	16	**5.0**	83
DDG2	16/01/2016	1.3	28	0.4	8	1.7	36
DDG2	17/02/2016	Location not accessible at time of sampling.					
DDG2	17/03/2016	6^^	102^^	1.8^^	31^^	**7.8^^**	133^^
DDG2	15/04/2016	5.9	101	1.1	19	**7.0**	120
DDG2	16/05/2016	10.9	205	1.6	30	**12.5**	235
DDG2	15/06/2016	0.9	16	19.8	**349**	**20.7**	365
DDG2	14/07/2016	10.9	187	1.3	22	**12.2**	209
DDG2	15/08/2016	4.4	82	0.7	14	**5.1**	96
DDG2	15/09/2016	6.5	118	0.9	18	**7.4**	
DDG2	25/10/2016	2.1	49	0.5	12	2.6	61
DDG2	14/11/2016	1.2	14	0.4	5	1.6	19
DDG2	15/12/2016	1.6	30	0.5	9	2.1	39
DDG2	16/01/2016	1.0	19	0.4	7	1.4	26

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	15/02/2017	3.2	56	1.1	20	**4.3**	76
DDG2	15/03/2017	3.0	49	0.6	10	3.6	59
DDG2	13/04/2017	1.0	17	0.2	4	1.2	21
DDG2	15/05/2017	1.0	19	0.3	5	1.3	24
DDG2	15/06/2017	2.0	37	0.4	7	2.4	44
DDG2	14/07/2017	0.5	9	0.4	6	0.9	15
DDG2	15/08/2017	1.6	31	0.5	8	2.1	39
DDG2	15/09/2017	0.5	9	<0.1	<1	0.3	6
DDG2	13/10/2017	0.9	15	0.1	2	1.0	17
DDG2	15/11/2017	1.0	19	0.2	5	1.2	24
DDG2	15/12/2017	1.3	23	0.2	3	1.5	26
DDG2	15/01/2018	1.6	30	0.5	9	2.1	39
DDG2	16/02/2018	1.5	29	0.4	6	1.9	35
DDG2	15/03/2018	1.8	29	1.2	19	3.0	48
DDG2	16/04/2018	0.8	15	0.3	5	1.1	20
DDG2	14/05/2018	1.9	32	0.3	5	2.2	37
DDG2	15/06/2018	1.3	24	0.4	8	1.7	32
DDG2	16/07/2108	1.2	21	0.4	8	1.6	29
DDG2	16/08/2108	0.3	6	0.2	2	0.5	8
DDG2	13/09/2018	1.2	20	0.6	10	1.8	30
DDG2	15/10/2018	1.9	35	0.8	15	2.7	50
DDG2	15/11/2018	0.7	12	0.6	11	1.3	23
DDG2	13/12/2018	1.0	16	0.4	7	1.4	23
DDG2	14/01/2019	4.5	85	3.0	56	**7.5**	141
DDG2	15/02/2018	4.4	83	1.2	23	**5.6**	106
DDG2	14/03/2018	3.8	61	1.0	15	**4.8**	76
DDG2	15/04/2019	1.8	34	0.7	14	2.5	48
DDG2	14/05/2019	1.8	30	0.1	3	1.9	33
DDG2	13/06/2019	0.5	9	0.3	5	0.8	14
DDG2	15/07/2019	0.8	16	0.4	6	1.2	22
DDG2	14/08/2019	0.3	6	0.2	2	0.5	8
DDG2	17/09/2019	1.8	37	0.7	14	2.5	51
DDG2	14/10/2019	2.3	37	0.7	10	3.0	47
DDG2	14/11/2019	2.6	48	0.7	13	3.3	61
DDG2	16/12/2019	7.9	148	3.3	63	**11.2**	211
DDG2	15/01/2020	3.2	56	0.9	17	**4.1**	73
DDG2	14/02/2020	5.5	98	1.6	27	**7.1**	125
DDG2	16/03/2020	1.9	35	0.9	17	2.8	52
DDG2	16/04/2020	1.2	22	0.8	13	2.0	35
DDG2	14/05/2020	0.6	10	0.6	10	1.2	20
DDG2	16/06/2020	1.2	24	0.5	9	1.7	33
DDG2	15/07/2020	0.9	16	0.5	8	1.4	24
DDG2	17/08/2020	0.5	10	0.4	8	0.9	18
DDG2	15/09/2020	1.4	24	0.5	8	1.9	32
DDG2	16/10/2020	1.6	30	0.7	12	2.3	42
DDG2	13/11/2020	2.1	35	1.1	17	3.2	52
DDG2	17/12/2020	5.0	101	1.2	23	**6.2**	124
DDG2	14/01/2021	0.8	14	0.7	11	1.5	25
DDG2	15/02/2021	1.9	36	0.3	5	2.2	41
DDG2	11/03/2021	3.7	53	0.8	10	**4.5**	63
DDG2	15/04/2021	0.4	9	0.4	8	0.8	17
DDG2	19/05/2021	1.1	22	0.3	6	1.4	28
DDG2	11/06/2021	0.9	12	0.4	5	1.3	17
DDG2	15/07/2021	0.7	15	0.2	3	0.9	18
DDG2	12/08/2021	0.3	5	0.1	2	0.4	7
DDG2	14/09/2021	1.3	23	0.6	10	1.9	33
DDG2	15/10/2021	2.4	44	0.8	15	3.2	59
DDG2	12/11/2021	2.6	43	0.7	12	3.3	55
DDG2	16/12/2021	2.9	58	0.6	12	2.1	42
DDG2	14/01/2022	2.6	45	0.7	11	3.3	56
DDG2	16/02/2022	3.6	70	1.0	19	**4.6**	89
DDG2	17/03/2022	1.2	20	0.2	4	1.4	24
DDG2	14/04/2022	1.0	17	0.5	8	1.5	25
DDG2	13/05/2022	0.5	8	0.4	8	0.9	16

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	15/06/2022	0.4	8	0.2	4	0.6	12
DDG2	18/07/2022	0.8	16	0.8	16	1.6	32
DDG2	17/08/2022	0.8	14	0.1	2	0.9	16
DDG2	14/09/2022	2.1	34	0.4	8	2.5	42
DDG2	12/10/2022	1.5	24	1.2	20	2.7	44
DDG2	18/11/2022	1.3	28	1.4	30	2.7	58
DDG2	12/12/2022	3.3	46	1.1	16	4.4	62
DDG2	13/01/2023	2.2	42	0.8	15	3.0	57
DDG2	17/02/2023	1.5	30	0.3	8	1.8	38
DDG2	14/03/2023	3.3	49	0.6	9	3.9	58
DDG2	14/04/2023	2.9	53	0.9	16	3.8	69
DDG2	17/05/2023	0.8	15	0.5	11	1.3	26
DDG2	09/06/2023	0.3	4	<0.1	<2	0.4	5
DDG2	10/07/2023	0.4	8.0	<0.1	<2	0.4	8
DDG2	15/08/2023	0.6	12	0.3	7	0.9	19

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)
^^: Dust gauge left in the field two months. Results may not be representative.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG3	14/10/2011	3.0	51	0.9	16	3.9	67
DDG3	15/11/2011	5.0	95	1.2	21	**6.2**	116
DDG3	16/12/2011	2.1	38	0.5	9	2.6	47
DDG3	16/01/2012	0.8	16	0.2	2	1.0	18
DDG3	14/02/2012	1.7	29	0.5	9	2.2	38
DDG3	16/03/2012	1.5	27	<0.1	<1	1.5	27
DDG3	16/04/2012	2.6	48	0.3	5	2.9	53
DDG3	16/05/2012	0.9	16	0.6	12	1.5	28
DDG3	14/06/2012	2.7	44	0.5	9	3.2	53
DDG3	13/07/2012	1.8	30	0.3	5	2.1	35
DDG3	16/08/2012	0.6	11	0.3	7	0.9	18
DDG3	18/09/2012	1.9	35	0.5	11	2.4	45
DDG3	18/10/2012	4.6	84	1.0	18	**5.6**	102
DDG3	15/11/2012	2.2	37	0.6	9	2.8	46
DDG3	20/12/2012	2.5	48	0.6	13	3.1	61
DDG3	15/01/2013	2.3	38	0.5	8	2.8	46
DDG3	13/02/2013	2.1	36	0.5	8	2.6	44
DDG3	18/03/2013	2.2	43	0.7	14	2.9	57
DDG3	17/04/2013	2.9	52	0.8	13	3.7	65
DDG3	17/05/2013	1.1	20	0.8	13	1.9	33
DDG3	17/06/2013	2.0	36	0.4	7	2.4	43
DDG3	16/07/2013	1.6	27	0.3	6	1.9	33
DDG3	14/08/2013	1.8	31	0.2	3	2.0	34
DDG3	17/09/2013	1.9	35	0.5	11	2.4	46
DDG3	17/10/2013	1.5	27	0.4	7	1.9	34
DDG3	14/11/2013	2.8	47	0.8	12	3.6	59
DDG3	16/12/2013	3.1	58	0.3	7	3.4	65
DDG3	13/01/2014	2.2	37	0.8	13	3.0	50
DDG3	11/02/2014	5.4	95	0.7	13	**6.1**	108
DDG3	14/03/2014	3.5	63	1.2	22	**4.7**	85
DDG3	14/04/2014	2.8	51	0.9	16	3.7	67
DDG3	16/05/2014	1.1	21	0.4	8	1.5	29
DDG3	16/06/2014	2.0	36	0.3	6	2.3	42
DDG3	14/07/2014	1.3	21	0.3	5	1.6	26
DDG3	14/08/2014	2.6	47	0.7	14	3.3	61
DDG3	16/09/2014	1.4	27	0.2	5	1.6	32
DDG3	17/10/2014	3.2	59	0.9	16	**4.1**	75
DDG3	14/11/2014	3.3	55	1.0	16	**4.3**	71
DDG3	16/12/2014	2.8	52	1.0	19	3.8	71
DDG3	15/01/2015	3.6	64	1.2	20	**4.8**	84
DDG3	13/02/2015	2.6	44	0.9	15	3.5	59
DDG3	16/03/2015	3.7	68	0.8	15	**4.5**	83
DDG3	14/04/2015	3.7	64	0.8	13	**4.5**	77
DDG3	14/05/2015	1.4	25	0.6	11	2.0	36
DDG3	15/06/2015	1.6	30	0.4	8	2.0	38
DDG3	15/07/2015	4.1	73	1.0	17	**5.1**	90
DDG3	14/08/2015	1.0	18	0.1	1	1.1	19
DDG3	15/09/2015	4.9	92	1.0	20	**5.9**	112
DDG3	14/10/2015	4.2	72	1.4	23	**5.6**	95
DDG3	13/11/2015	4.0	70	1.1	20	**5.1**	90
DDG3	11/12/2015	4.2	70	1.4	22	**5.6**	92
DDG3	16-01-216	0.1	2	<0.1	<1	0.4	2
DDG3	17/02/2016	3.9	73	0.9	17	**4.8**	90
DDG3	17/03/2016	6.3	107	1.8	31	**8.1**	138
DDG3	15/04/2016	2.7	44	0.3	5	2.9	49
DDG3	16/05/2016	3.9	71	1.1	20	**5.0**	91
DDG3	15/06/2016	3.5	61	0.5	10	**4.0**	71
DDG3	14/07/2016	2.5	42	0.5	10	3.0	52
DDG3	15/08/2016	1.3	25	0.4	7	1.7	32
DDG3	15/09/2016	3.2	59	0.7	12	3.9	71
DDG3	25/10/2016	2.1	50	0.8	19	2.9	69
DDG3	14/11/2016	1.9	22	0.7	9	2.6	31
DDG3	15/12/2016	2.4	44	1.1	19	3.5	63
DDG3	16/01/2016	1.4	26	0.6	11	2.0	37

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG3	15/02/2017	2.6	46	1.0	17	3.6	63
DDG3	15/03/2017	3.0	50	0.9	15	3.9	65
DDG3	13/04/2017	1.3	23	0.6	9	1.9	32
DDG3	15/05/2017	1.2	22	0.3	7	1.5	29
DDG3	15/06/2017	3.1	56	0.7	13	3.8	69
DDG3	14/07/2017	1.2	21	0.2	3	1.4	24
DDG3	15/08/2017	2.5	47	0.6	12	3.1	59
DDG3	15/09/2017	0.3	6	<0.1	<1	0.3	6
DDG3	13/10/2017	1.6	26	0.2	4	1.8	30
DDG3	15/11/2017	1.7	34	0.4	7	2.1	41
DDG3	15/12/2017	2.0	35	0.3	5	1.5	26
DDG3	15/01/2018	3.1	57	0.8	15	3.9	64
DDG3	16/02/2018	2.4	46	0.5	8	2.9	54
DDG3	15/03/2018	1.7	27	0.3	5	2.0	32
DDG3	16/04/2018	1.1	21	0.4	7	1.5	28
DDG3	14/05/2018	1.6	27	0.3	4	1.9	31
DDG3	15/06/2018	1.6	30	0.3	6	1.9	36
DDG3	16/07/2018	1.7	31	0.7	13	2.4	44
DDG3	16/08/2018	1.3	23	0.2	4	1.5	27
DDG3	13/09/2018	1.9	33	0.7	11	2.6	44
DDG3	15/10/2018	2.0	38	0.4	8	2.4	46
DDG3	15/11/2018	2.3	42	0.9	16	3.2	58
DDG3	13/12/2018	3.0	47	1.0	16	**4.0**	63
DDG3	14/01/2019	2.7	51	1.3	25	**4.0**	76
DDG3	15/02/2019	3.3	63	0.7	12	**4.0**	75
DDG3	14/03/2019	3.1	49	0.7	12	3.8	61
DDG3	15/04/2019	1.3	25	0.5	9	1.8	34
DDG3	14/05/2019	2.0	35	0.7	11	2.7	46
DDG3	13/06/2019	1.0	18	0.6	10	1.6	28
DDG3	15/07/2019	1.8	30	0.5	9	0.5	10
DDG3	14/08/2019	0.3	5	0.2	4	0.5	9
DDG3	17/09/2019	1.8	37	0.8	16	2.6	53
DDG3	14/10/2019	1.8	28	0.5	9	2.3	37
DDG3	14/11/2019	3.1	57	0.8	14	3.9	71
DDG3	16/12/2019	3.7	69	1.0	19	**4.7**	88
DDG3	15/01/2020	2.7	47	0.8	14	3.5	61
DDG3	14/02/2020	5.8	103	1.4	24	**7.2**	127
DDG3	16/03/2020	1.1	20	0.5	10	1.6	30
DDG3	16/04/2020	0.8	14	0.6	11	1.4	25
DDG3	14/05/2020	1.2	20	0.6	10	1.8	30
DDG3	16/06/2020	1.5	29	0.5	10	2.0	39
DDG3	15/07/2020	1.3	23	0.4	6	1.7	29
DDG3	17/08/2020	0.5	9	0.3	7	0.8	16
DDG3	15/09/2020	1.5	25	0.5	9	2.0	34
DDG3	16/10/2020	1.7	31	0.6	11	2.3	42
DDG3	13/11/2020	1.8	29	0.6	10	2.4	39
DDG3	17/12/2020	3.3	66	1.3	26	**4.6**	92
DDG3	14/01/2021	1.0	16	0.6	10	1.6	26
DDG3	15/02/2021	4.2	80	0.6	11	**4.8**	91
DDG3	11/03/2021	2.3	33	0.6	8	2.9	41
DDG3	15/04/2021	1.9	39	0.8	17	2.7	56
DDG3	19/05/2021	1.0	20	0.2	4	1.2	24
DDG3	11/06/2021	2.3	31	0.7	10	3.0	41
DDG3	15/07/2021	1.6	33	0.5	9	2.1	42
DDG3	12/08/2021	1.0	16	0.4	7	1.4	23
DDG3	14/09/2021	1.5	27	0.7	12	2.2	39
DDG3	15/10/2021	1.8	33	0.8	15	2.6	48
DDG3	12/11/2021	2.6	43	0.8	13	3.4	56
DDG3	16/12/2021	1.6	33	0.4	7	2.0	40
DDG3	14/01/2022	1.2	21	0.8	13	2.0	34
DDG3	16/02/2022	1.6	32	1.0	19	2.6	51
DDG3	17/03/2022	0.5	9	0.2	3	0.7	12
DDG3	14/04/2022	-	-	-	-	-	-
DDG3	13/05/2022	0.9	16	0.7	11	1.6	27

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG3	15/06/2022	1.0	19	0.4	8	1.4	27
DDG3	18/07/2022	1.5	29	0.7	13	2.2	42
DDG3	17/08/2022	1.1	20	0.3	5	1.4	25
DDG3	12/10/2022	0.7	12	0.5	8	1.2	20
DDG3	18/11/20222	0.3	7	0.4	9	0.7	16
DDG3	12/12/2022	1.8	25	1.2	17	3.0	42
DDG3	13/01/2023	0.9	17	0.5	10	1.4	27
DDG3	17/02/2023	1.6	34	0.4	8	2.0	42
DDG3	14/03/2023	0.4	6	0.1	2	0.5	8
DDG3	14/04/2023	0.5	10	0.3	5	0.8	15
DDG3	17/05/2023	1.1	21	0.6	13	1.7	34
DDG3	09/06/2023	0.4	5	<0.1	<2	0.4	5
DDG3	10/07/2023	0.8	14.0	0.2	5.0	1.0	19
DDG3	15/08/2023	1.0	21.0	0.4	8.0	1.4	29.0

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG4	14/10/2011	3.2	55	1.2	20	**4.4**	75
DDG4	15/11/2011	3.8	71	3.2	61	**7.0**	132
DDG4	16/12/2011	1.4	26	1.3	23	2.7	49
DDG4	16/01/2012	2.8	52	1.8	34	**4.6**	86
DDG4	14/02/2012	1.6	28	1.3	21	2.9	49
DDG4	16/03/2012	1.6	30	0.5	8	2.1	38
DDG4	16/04/2012	3.0	55	0.7	12	3.7	67
DDG4	16/05/2012	1.5	28	0.8	14	2.3	42
DDG4	14/06/2012	2.7	45	0.6	10	3.3	55
DDG4	13/07/2012	1.8	30	0.4	6	2.2	36
DDG4	16/08/2012	1.2	23	0.5	10	1.7	33
DDG4	18/09/2012	4.3	81	1.3	24	**5.6**	105
DDG4	18/10/2012	3.2	58	0.7	14	3.9	72
DDG4	15/11/2012	2.2	37	0.6	10	2.8	47
DDG4	20/12/2012	2.6	51	1.3	24	3.9	75
DDG4	15/01/2013	2.2	37	0.6	9	2.8	46
DDG4	13/02/2013	1.9	33	0.6	10	2.5	43
DDG4	18/03/2013	1.3	25	0.7	14	2.0	39
DDG4	17/04/2013	2.9	51	0.7	13	3.6	64
DDG4	17/05/2013	1.5	27	1.3	22	2.8	49
DDG4	17/06/2013	1.9	35	0.7	13	2.6	48
DDG4	16/07/2013	1.1	18	0.4	8	1.5	26
DDG4	14/08/2013	1.3	23	0.3	4	1.6	27
DDG4	17/09/2013	4.3	81	1.3	24	**5.6**	105
DDG4	17/10/2013	4.5	82	1.3	23	**5.8**	105
DDG4	14/11/2013	6.8	112	0.9	15	**7.7**	127
DDG4	16/12/2013	2.9	54	0.4	9	3.3	63
DDG4	13/01/2014	1.2	20	0.3	5	1.5	25
DDG4	11/02/2014	1.5	26	0.2	4	1.7	30
DDG4	14/03/2014	3.2	59	1.1	20	**4.3**	79
DDG4	14/04/2014	3.0	54	0.7	13	3.7	67
DDG4	16/05/2014	1.6	31	0.6	10	2.2	41
DDG4	16/06/2014	4.2	77	0.9	16	**5.1**	93
DDG4	14/07/2014	2.2	37	0.6	9	2.8	46
DDG4	14/08/2014	6.7	122	1.9	35	**8.6**	157
DDG4	16/09/2014	1.6	32	0.5	8	2.1	40
DDG4	17/10/2014	6.3	115	1.8	33	**8.1**	148
DDG4	14/11/2014	2.5	42	0.7	11	3.2	53
DDG4	16/12/2014	2.9	55	0.9	16	3.8	71
DDG4	15/01/2015	1.7	30	0.6	11	2.3	41
DDG4	13/02/2015	1.9	32	1.1	19	3.0	51
DDG4	16/03/2015	2.4	44	0.7	13	3.1	57
DDG4	14/04/2015	2.1	36	0.2	4	2.3	40
DDG4	14/05/2015	1.9	33	1.0	18	2.9	51
DDG4	15/06/2015	2.0	37	0.4	9	2.4	46
DDG4	15/07/2015	2.3	40	0.7	13	3.0	53
DDG4	14/08/2015	1.0	17	0.2	5	1.2	22
DDG4	15/09/2015	3.7	70	1.1	21	**4.8**	91
DDG4	14/10/2015	3.2	54	1.0	18	**4.2**	72
DDG4	13/11/2015	3.7	65	0.9	16	**4.6**	81
DDG4	11/12/2015	3.5	57	0.9	16	**4.4**	73
DDG4	16/01/2016	1.7	35	0.4	10	2.4	45
DDG4	17/02/2016	2.0	38	0.4	7	2.4	45
DDG4	17/03/2016	5.4	92	1.5	26	**6.9**	118
DDG4	15/04/2016	2.6	44	0.3	5	2.9	49
DDG4	16/05/2016	3.9	71	1.1	20	**5.0**	91
DDG4	15/06/2016	3.9	69	1.0	18	**4.9**	87
DDG4	14/07/2016	2.1	36	0.4	7	2.5	43
DDG4	15/08/2016	1.1	21	0.3	6	1.4	27
DDG4	15/09/2016	3.7	67	0.4	8	**4.1**	75
DDG4	25/10/2016	2.1	50	0.7	15	2.8	65
DDG4	14/11/2016	1.7	20	0.5	6	2.2	26
DDG4	15/12/2016	3.2	58	0.9	17	**4.1**	75
DDG4	16/01/2016	2.0	37	0.5	10	2.5	47

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG4	15/02/2017	3.0	53	1.0	17	4.0	70
DDG4	15/03/2017	2.1	35	1.0	16	3.1	51
DDG4	13/04/2017	1.9	32	0.9	15	2.8	47
DDG4	15/05/2017	1.6	30	0.4	8	2.0	38
DDG4	15/06/2017	4.3	78	1.9	35	**6.2**	113
DDG4	14/07/2017	2.2	37	0.3	6	2.5	43
DDG4	15/08/2017	3.0	57	0.7	12	3.7	69
DDG4	15/09/2017	1.8	32	0.5	10	2.3	42
DDG4	13/10/2017	3.8	63	1.1	17	**4.9**	80
DDG4	15/11/2017	2.0	39	0.8	16	2.8	55
DDG4	15/12/2017	2.8	50	0.4	7	3.2	57
DDG4	15/01/2018	2.7	49	0.8	15	3.5	64
DDG4	16/02/2018	2.1	40	0.4	8	2.5	48
DDG4	15/03/2018	2.3	36	0.3	6	2.6	42
DDG4	16/04/2018	2.3	43	0.7	13	3.0	56
DDG4	14/05/2018	2.0	33	0.4	7	2.4	40
DDG4	15/06/2018	1.4	27	0.5	8	1.9	35
DDG4	16/07/2018	2.4	44	0.7	12	3.1	56
DDG4	16/08/2018	0.1	1	<0.1	<1	0.1	1
DDG4	13/09/2018	5.1	87	1.2	21	**6.3**	108
DDG4	15/10/2018	1.9	36	0.6	11	2.5	47
DDG4	15/11/2018	2.3	42	0.7	13	3.0	55
DDG4	13/12/2018	2.1	34	1.0	16	3.1	50
DDG4	14/01/2019	4.3	81	1.3	25	**5.6**	106
DDG4	15/02/2019	3.6	68	0.6	12	**4.2**	80
DDG4	14/03/2019	2.9	46	0.7	11	3.6	57
DDG4	15/04/2019	2.7	50	0.7	14	3.4	64
DDG4	14/05/2019	2.5	43	0.6	10	3.1	53
DDG4	13/06/2019	1.8	31	0.6	11	2.4	42
DDG4	15/07/2019	2.2	41	0.7	14	2.9	55
DDG4	14/08/2019	0.6	11	0.4	6	1.0	17
DDG4	17/09/2019	1.2	25	1.0	20	2.2	45
DDG4	14/10/2019	8.0	127	3.4	55	**11.4**	182
DDG4	14/11/2019	4.0	73	1.2	22	**5.2**	95
DDG4	16/12/2019	3.7	70	0.8	15	**4.5**	85
DDG4	15/01/2020	2.4	43	0.9	16	3.3	59
DDG4	14/02/2020	6.6	117	1.6	28	**8.2**	145
DDG4	16/03/2020	1.2	21	0.7	13	1.9	34
DDG4	16/04/2020	1.1	20	0.8	13	1.9	33
DDG4	14/05/2020	3.5	60	0.8	14	**4.3**	74
DDG4	16/06/2020	2.6	50	1.5	30	**4.1**	80
DDG4	15/07/2020	2.5	43	0.8	14	3.3	57
DDG4	17/08/2020	1.6	31	0.6	12	2.2	43
DDG4	15/09/2020	2.8	48	0.7	11	3.5	59
DDG4	16/10/2020	3.9	71	1.1	20	**5.0**	91
DDG4	13/11/2020	3.1	51	0.9	15	**4.0**	66
DDG4	17/12/2020	5.3	107	1.2	24	**6.5**	131
DDG4	14/01/2021	1.2	19	0.7	13	1.9	32

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG4	15/02/2021	4.7	89	1.1	21	**5.8**	110
DDG4	11/03/2021	3.2	45	1.2	17	**4.4**	62
DDG4	15/04/2021	1.1	22	0.7	16	1.8	38
DDG4	19/05/2021	4.6	92	1.2	24	**5.8**	116
DDG4	11/06/2021	3.8	52	0.8	10	**4.6**	62
DDG4	15/07/2021	2.1	43	0.7	14	2.8	57
DDG4	12/08/2021	0.9	15	0.3	5	1.2	20
DDG4	14/09/2021	0.2	4	0.2	3	0.4	7
DDG4	15/10/2021	1.8	33	0.8	15	2.6	48
DDG4	12/11/2021	1.8	30	1.3	21	3.1	51
DDG4	16/12/2021	3.6	72	3.9	79	**7.5**	151
DDG4	14/01/2022	1.5	25	1.5	26	3.0	51
DDG4	16/02/2022	1.0	20	0.6	12	1.6	32
DDG4	17/03/2022	1.1	18	0.9	16	2.0	34
DDG4	14/04/2022	1.6	26	1.7	29	3.3	55
DDG4	13/05/2022	1.8	31	1.2	21	3.0	52
DDG4	15/06/2022	1.5	29	0.9	17	2.4	46
DDG4	18/07/2022	2.0	38	0.7	15	2.7	53
DDG4	17/08/2022	3.1	55	1.2	21	**4.3**	76
DDG4	14/09/2022	1.0	17	0.5	8	1.5	25
DDG4	12/10/2022	1.5	24	1.0	18	2.5	42
DDG4	18/11/2022	0.6	13	0.9	19	1.5	32
DDG4	12/12/2022	2.8	40	3.3	46	**6.1**	86
DDG4	13/01/2023	1.3	24	2.5	48	**3.8**	72
DDG4	17/02/2023	2.1	43	1.6	33	**3.7**	76
DDG4	14/03/2023	1.4	20	1.7	26	**3.1**	46
DDG4	14/04/2023	1.5	28	1.5	27	3	55
DDG4	17/05/2023	2.3	44	1.7	34	4	78
DDG4	09/06/2023	1.7	23	0.2	3	1.9	26
DDG4	10/07/2023	1.9	35.0	0.6	11.0	2.5	46
DDG4	15/08/2023	1.9	40	0.8	17	2.7	57
* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)							
DDG5	14/10/2011	2.2	37	1.7	30	3.9	67
DDG5	15/11/2011	2.9	55	1.2	22	**4.1**	77
DDG5	16/12/2011	1.0	18	2.3	42	3.3	60
DDG5	16/01/2012	2.3	43	2.9	55	**5.2**	98
DDG5	14/02/2012	0.3	5	0.1	1	0.4	6
DDG5	16/03/2012	0.7	12	1.6	30	2.3	42
DDG5	16/04/2012	3.0	54	1.2	23	**4.2**	77
DDG5	16/05/2012	1.0	18	0.7	13	1.7	31
DDG5	14/06/2012	1.1	18	0.3	5	1.4	23
DDG5	13/07/2012	0.5	9	0.2	2	0.7	11
DDG5	16/08/2012	0.6	12	0.3	5	0.9	17
DDG5	18/09/2012	2.3	43	0.5	10	2.8	53
DDG5	18/10/2012	2.1	39	0.7	13	2.8	52
DDG5	15/11/2012	1.4	23	0.7	12	2.1	35
DDG5	20/12/2012	2.1	40	1.0	21	3.1	61
DDG5	15/01/2013	2.1	35	0.5	8	2.6	43
DDG5	13/02/2013	1.1	18	0.2	4	1.3	22
DDG5	18/03/2013	0.5	9	0.4	8	0.9	17
DDG5	17/04/2013	1.4	25	0.6	10	2.0	35
DDG5	17/05/2013	1.2	21	0.8	15	2.0	36
DDG5	17/06/2013	1.3	23	0.7	13	2.0	36
DDG5	16/07/2013	2.0	35	2.0	34	4.0	69
DDG5	14/08/2013	0.9	16	1.0	16	1.9	32
DDG5	17/09/2013	2.3	43	0.5	10	2.8	53
DDG5	17/10/2013	1.4	25	0.6	12	2.0	37
DDG5	14/11/2013	2.6	43	0.4	7	3.0	50
DDG5	16/12/2013	1.9	35	0.9	18	2.8	53
DDG5	13/01/2014	0.6	10	0.4	6	1.0	16
DDG5	11/02/2014	0.4	7	0.2	3	0.6	10
DDG5	14/03/2014	1.6	30	1.2	21	2.8	51
DDG5	14/04/2014	1.1	20	0.6	11	1.7	31
DDG5	16/05/2014	0.6	12	0.2	4	0.8	16

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG5	16/06/2014	1.3	24	0.2	4	1.5	28
DDG5	14/07/2014	0.7	11	<0.1	1	0.7	12
DDG5	14/08/2014	1.6	29	0.4	8	2.0	37
DDG5	16/09/2014	0.6	11	0.1	3	0.7	14
DDG5	17/10/2014	1.2	22	0.7	13	1.9	35
DDG5	14/11/2014	0.8	14	0.6	9	1.4	23
DDG5	16/12/2014	1.1	20	2.0	39	3.1	59
DDG5	15/01/2015	2.7	48	0.9	15	3.6	63
DDG5	13/02/2015	0.5	8	0.4	7	0.9	15
DDG5	16/03/2015	1.2	22	0.7	12	1.9	34
DDG5	14/04/2015	1.3	22	0.9	15	2.2	37
DDG5	14/05/2015	1.4	24	1.1	21	2.5	45
DDG5	15/06/2015	1.2	22	0.3	7	1.5	29
DDG5	15/07/2015	2.2	39	1.1	19	3.3	58
DDG5	14/08/2015	0.5	9	0.1	1	0.6	10
DDG5	15/09/2015	1.9	35	0.8	15	2.7	50
DDG5	14/10/2015	1.9	32	0.7	13	2.6	45
DDG5	13/11/2015	2.0	36	1.7	29	3.7	65
DDG5	11/12/2015	2.7	45	3.1	51	**5.8**	96
DDG5	16/01/2016	1.2	26	0.6	13	1.8	39
DDG5	17/02/2016	1.0	19	0.2	4	1.2	23
DDG5	17/03/2016	1.5	26	1.1	19	2.6	45
DDG5	15/04/2016	1.1	19	0.1	2	1.2	21
DDG5	16/05/2016	2.0	37	0.8	14	2.8	51
DDG5	15/06/2016	2.7	47	0.8	14	3.5	61
DDG5	14/07/2016	1.8	31	0.4	7	2.2	38
DDG5	15/08/2016	0.8	15	0.3	6	1.1	21
DDG5	15/09/2016	1.8	33	0.6	11	2.4	44
DDG5	25/10/2016	1.2	29	0.4	9	1.6	38
DDG5	14/11/2016	1.4	17	0.5	5	1.9	22
DDG5	15/12/2016	1.3	23	0.7	14	2.0	37
DDG5	16/01/2016	1.1	21	0.8	15	1.9	36
DDG5	15/02/2017	1.3	23	0.8	14	2.1	37
DDG5	15/03/2017	0.7	12	0.5	8	1.2	20
DDG5	13/04/2017	0.6	10	0.4	7	1.0	17
DDG5	15/05/2017	0.6	12	0.4	6	1.0	18
DDG5	15/06/2017	1.9	34	1.2	22	3.1	56
DDG5	14/07/2017	0.5	8	<0.1	<1	0.5	8
DDG5	15/08/2017	2.1	39	0.6	11	2.7	50
DDG5	15/09/2017	0.4	8	0.1	2	0.5	10
DDG5	13/10/2017	1.2	19	0.4	7	1.6	26
DDG5	15/11/2017	0.9	17	0.5	10	1.4	27
DDG5	15/12/2017	1.3	23	0.3	5	1.6	28
DDG5	15/01/2018	1.6	29	1.0	18	2.6	47
DDG5	16/02/2018	2.1	40	0.6	10	2.7	50
DDG5	15/03/2018	14.0	22	0.3	5	1.7	27
DDG5	16/04/2018	1.1	20	0.1	3	1.2	23
DDG5	14/05/2018	1.2	19	<0.1	<1	1.2	19
DDG5	15/06/2018	1.1	21	0.2	3	1.3	24
DDG5	16/07/2018	1.2	21	0.8	16	2.0	37
DDG5	16/08/2018	1.0	17	0.4	7	1.4	24
DDG5	13/09/2018	1.6	27	0.7	12	2.3	39
DDG5	15/10/2018	1.3	25	1.0	19	2.3	44
DDG5	15/11/2018	1.5	27	1.2	23	2.7	50
DDG5	13/12/2018	1.2	19	3.3	52	**4.5**	71
DDG5	14/01/2019	5.6	105	3.3	63	**8.9**	168
DDG5	15/02/2019	1.6	31	0.3	4	1.9	35
DDG5	14/03/2019	1.1	17	0.2	4	1.3	21
DDG5	15/04/2019	0.4	7	<0.1	<1	0.4	7
DDG5	14/05/2019	1.2	21	0.5	8	1.7	29
DDG5	13/06/2019	1.0	17	0.7	13	1.7	30
DDG5	15/07/2019	0.8	16	0.5	8	1.3	24
DDG5	14/08/2019	0.7	13	1.2	21	1.9	34
DDG5	17/09/2019	1.3	27	0.7	13	2.0	40

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG5	14/10/2019	2.7	43	2.6	41	**5.3**	84
DDG5	14/11/2019	1.3	23	0.4	8	1.7	31
DDG5	16/12/2019	2.4	45	0.7	13	3.1	58
DDG5	15/01/2020	2.2	38	0.6	12	2.8	50
DDG5	14/02/2020	4.6	82	1.5	26	**6.1**	108
DDG5	16/03/2020	0.9	16	1.1	21	2.0	37
DDG5	16/04/2020	1.0	17	0.6	12	1.6	29
DDG5	14/05/2020	1.0	17	0.6	13	1.8	30
DDG5	16/06/2020	0.9	17	0.6	12	1.5	29
DDG5	15/07/2020	0.8	14	0.2	3	1.0	17
DDG5	17/08/2020	0.6	12	0.8	16	1.4	28
DDG5	15/09/2020	1.0	17	0.5	9	1.5	26
DDG5	16/10/2020	0.9	16	0.4	8	1.3	24
DDG5	13/11/2020	1.4	23	0.8	14	2.2	37
DDG5	17/12/2020	1.5	30	0.6	13	2.1	43
DDG5	14/01/2021	0.8	14	0.5	7	1.3	21
DDG5	15/02/2021	1.3	24	0.3	7	1.6	31
DDG5	11/03/2021	1.3	18	0.4	6	1.7	24
DDG5	15/04/2021	0.1	3	0.2	4	0.3	7
DDG5	19/05/2021	2.4	49	0.7	13	3.1	62
DDG5	11/06/2021	2.5	34	0.7	9	3.2	43
DDG5	15/07/2021	1.4	29	0.5	10	1.9	39
DDG5	12/08/2021	0.7	11	0.8	13	1.5	24
DDG5	14/09/2021	1.6	28	0.7	12	2.3	40
DDG5	15/10/2021	1.7	31	0.5	10	2.2	41
DDG5	12/11/2021	1.0	16	0.6	10	1.6	26
DDG5	16/12/2021	0.7	14	0.1	2	0.8	16
DDG5	14/01/2022	0.5	8	0.6	10	1.1	18
DDG5	16/02/2022	0.6	11	0.4	8	1.0	19
DDG5	17/03/2022	0.5	9	0.3	5	0.8	14
DDG5	14/04/2022	0.4	6	0.4	8	0.8	14
DDG5	13/05/2022	0.4	7	0.3	5	0.7	12
DDG5	15/06/2022	0.6	11	0.3	7	0.9	18
DDG5	18/07/2022	1.3	25	0.8	16	2.1	41
DDG5	17/08/2022	1.3	23	0.7	13	2.0	36
DDG5	14/09/2022	1.6	26	0.6	11	2.2	37
DDG5	12/10/2022	1.4	23	1.4	24	2.8	47
DDG5	18/11/2022	0.8	17	0.9	19	1.7	36
DDG5	12/12/2022	1.5	21	1.3	18	2.8	39
DDG5	13/01/2023	0.5	9	0.6	12	1.1	21
DDG5	17/02/2023	0.6	12	0.5	11	1.1	23
DDG5	14/03/2023	0.4	6	0.2	3	0.6	9
DDG5	14/04/2023	0.5	10	0.4	6	0.9	16
DDG5	17/05/2023	0.4	8	0.4	8	0.8	16
DDG5	09/06/2023	0.2	3	<0.1	<2	0.2	3
DDG5	10/07/2023	0.6	11	0.6	6	0.9	17
DDG5	15/08/2023	0.5	11	0.3	6	0.8	17

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)

Appendix C

Quality Assurance and Quality Control

GOLDER
MEMBER OF WSP

DATA VALIDATION SUMMARY SHEET (NSW)

Project Name:	**FCC Wetherill Park Quarterly**	**Project Number:**	**PS134467**
Primary Laboratory:	**ALS Sydney**	**Work Order Number:**	**ES2232971**
Date Sampled:	**14/09/2022**	**Sample Medium:**	**Water**

Sample Information

Number of Primary Samples:	**5**	**Number of Triplicate Samples:**	**0**
Number of Duplicate Samples:	**0**	**Number of Other QAQC Samples:**	**0**

Documentation and Sample Handling Information

	Y/N	Comments
COC completed properly?	Y	Signed by field staff and laboratory personnel.
All requested analysis completed?	Y	All requested analyses on the COC performed by ALS
Samples received intact and chilled?	Y	ALS: 17.6'C, ice present, see overall comments. Security seal N/A.
Samples analysed within appropriate holding times?	Y	ALS: All samples were received and analysed within acceptable holding times.
Sample volumes sufficient for QC analysis?	Y	ALS: Sufficient sample volume was provided for all laboratory tests.
Are there non-NATA accredited methods used?	Y	ALS is not NATA accredited for ionic balance, see comments. All other methods used in this batch are accredited.
Chromatograms supplied as appropriate?	N/A	N/A.
Laboratory reports signed by authorised personnel?	Y	All reports signed.

QAQC Sample Information (Method Blank - MB, Rinsate Blank - RB, Field Blank - FB, Trip Blank - TB)

Type	Sample ID	Comments
MB	Method Blank	All results were below the LOR (ALS).

Trip Spike Information

Analyte	Control Spike Concentrations	Trip Spike Concentration	% Recovery	Comments
No TS was analysed for this batch.				

Laboratory Control Spike (LCS) Analyses

Analyte Group	Comments
All	All LCS recoveries are within the laboratory based DQIs (ALS).

Matrix Spike (MS) Analyses

Analyte Group	Comments
Sulfate and Total Organic Carbon	ALS: The MS recoveries for sulfate and total organic carbon were not determined in sample Anonymous (ES2232971--002) and Anonymous (ES2232839-002), repsectively. *Refer to overall comments.*
-	All other MS recoveries are within the laboratory based DQIs (ALS).

Laboratory Duplicates (LD) Analyses

Analyte Group	Sample ID	Comments
All	-	All LD RPDs are within the laboratory based DQIs (ALS).

Field Duplicates (FD) Analyses

Analyte Group	Primary ID	Duplicate ID	Comments
-	-	-	No FD taken in this batch.

Field Triplicates (FT) Analyses

Analyte Group	Primary ID	Triplicate ID	Comments
-	-	-	No FT taken in this batch.

Surrogate Compound Monitoring Analyses

Analyte Group	Analyte(s)	Comments
-	-	All surrogate recoveries are within acceptable DQIs (ALS).

Overall Comments

ALS: The sample receipt temperature reported by ALS was 17.6°C. The samples were collected and immediately placed in an esky with ice or ice bricks and sent to the laboratory. The elevated temperature may impact results for volatile and semi-volatile analytes and should be considered when interpreting the data.

ALS is not accredited for the reporting of ionic balance, total anions or total cations but is accredited for the analysis of the constituent ions. The lack of accreditation for anion-cation balance calculations is not considered to impact upon the integrity of the data set.

ALS: The MS recoveries for sulfate and total organic carbon were not determined in samples Anonymous (ES2232971--002) and Anonymous (ES2232839-002), respectively. ALS states, "MS recovery not determined, background level greater than or equal to 4x spike level." This is not expected to effect the overall validity of this data set as the recoveries for other analytes by the same method were within the acceptable ranges.

This batch has been validated and is considered suitable for environmental interpretive use.

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

*When concentrations are less than the LOR for both primary and duplicate/triplicate results, no RPDs are calculated

Performed By:	**Grace Bendall-Pease**	**Checked By:**	**Ivan Ward**
Date:	**27/09/2023**	**Date:**	

GOLDER
MEMBER OF WSP

DATA VALIDATION SUMMARY SHEET (NSW)

Project Name:	**FCC Wetherill Park Quarterly**	**Project Number:**	**PS134467**
Primary Laboratory:	**ALS Sydney**	**Work Order Number:**	**ES2244848**
Date Sampled:	**12/12/2022**	**Sample Medium:**	**Water**

Sample Information

Number of Primary Samples:	**3**	**Number of Triplicate Samples:**	**0**
Number of Duplicate Samples:	**0**	**Number of Other QAQC Samples:**	**0**

Documentation and Sample Handling Information

	Y/N	Comments
COC completed properly?	Y	Signed by field staff and laboratory personnel.
All requested analysis completed?	Y	All requested analyses on the COC performed by ALS
Samples received intact and chilled?	Y	ALS: 13.1'C, ice present, see overall comments. Security seal intact.
Samples analysed within appropriate holding times?	N	ALS reported a holding time exceedance for nitrate of 1 day, see overall comments. All other analyses were performed within the appropriate holding times
Sample volumes sufficient for QC analysis?	Y	ALS: Sufficient sample volume was provided for all laboratory tests.
Are there non-NATA accredited methods used?	Y	ALS is not NATA accredited for ionic balance, see comments. All other methods used in this batch are accredited.
Chromatograms supplied as appropriate?	N/A	N/A.
Laboratory reports signed by authorised personnel?	Y	All reports signed.

QAQC Sample Information (Method Blank - MB, Rinsate Blank - RB, Field Blank - FB, Trip Blank - TB)

Type	Sample ID	Comments
MB	Method Blank	All results were below the LOR (ALS).

Trip Spike Information

Analyte	Control Spike Concentrations	Trip Spike Concentration	% Recovery	Comments
No TS was analysed for this batch.				

Laboratory Control Spike (LCS) Analyses

Analyte Group	Comments
All	All LCS recoveries are within the laboratory based DQIs (ALS).

Matrix Spike (MS) Analyses

Analyte Group	Comments
Sulfate, Chloride, Ammonia and Nitrate plus Nitrate	ALS: The MS recoveries for sulfate (ED041G), chloride (ED045G), ammonia (EK055G) and nitrate plus nitrate (EK059G) were not determined in sample Anonymous (ES2445242-001), Anonymous (ES2245242-001), GW3 (ES244848-001) and Anonymous (ES2244611-001), repsectively. *Refer to overall comments.*
-	All other MS recoveries are within the laboratory based DQIs (ALS).

Laboratory Duplicates (LD) Analyses

Analyte Group	Sample ID	Comments
All	-	All LD RPDs are within the laboratory based DQIs (ALS).

Field Duplicates (FD) Analyses

Analyte Group	Primary ID	Duplicate ID	Comments
-	-	-	No FD taken in this batch.

Field Triplicates (FT) Analyses

Analyte Group	Primary ID	Triplicate ID	Comments
-	-	-	No FT taken in this batch.

Surrogate Compound Monitoring Analyses

Analyte Group	Analyte(s)	Comments
-	-	All surrogate recoveries are within acceptable DQIs (ALS).

Overall Comments

ALS: The sample receipt temperature reported by ALS was 13.1°C. The samples were collected and immediately placed in an esky with ice or ice bricks and sent to the laboratory. The elevated temperature may impact results for volatile and semi-volatile analytes and should be considered when interpreting the data.

ALS reported samples GW3, GW4 and SW2 breached the holding time for analyte by 1 day. These holding time exceedances may impact the results and should be considered when interpretating the data.

ALS is not accredited for the reporting of ionic balance, total anions or total cations but is accredited for the analysis of the constituent ions. The lack of accreditation for anion-cation balance calculations is not considered to impact upon the integrity of the data set.

ALS: The MS recoveries for sulfate (ED041G), chloride (ED045G), ammonia (EK055G) and nitrate plus nitrate (EK059G) were not determined in sample Anonymous (ES2445242-001), Anonymous (ES2245242-001), GW3 (ES244848-001) and Anonymous (ES2244611-001), repsectively. ALS states, "MS recovery not determined, background level greater than or equal to 4x spike level." This is not expected to effect the overall validity of this data set as the recoveries for other analytes by the same method were within the acceptable ranges.

This batch has been validated and is considered suitable for environmental interpretive use.

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

*When concentrations are less than the LOR for both primary and duplicate/triplicate results, no RPDs are calculated

Performed By:	**Grace Bendall-Pease**	**Checked By:**	**Ivan Ward**
Date:	**27/09/2023**	**Date:**	

GOLDER
MEMBER OF WSP

DATA VALIDATION SUMMARY SHEET (NSW)

Project Name:	**FCC Wetherill Park Quarterly**	**Project Number:**	**PS134467**
Primary Laboratory:	**ALS Sydney**	**Work Order Number:**	**ES2309067**
Date Sampled:	**20/03/2023**	**Sample Medium:**	**Water**

Sample Information

Number of Primary Samples:	**3**	**Number of Triplicate Samples:**	**0**
Number of Duplicate Samples:	**0**	**Number of Other QAQC Samples:**	**0**

Documentation and Sample Handling Information

	Y/N	Comments
COC completed properly?	Y	Signed by field staff and laboratory personnel.
All requested analysis completed?	Y	All requested analyses on the COC performed by ALS.
Samples received intact and chilled?	Y	ALS: 16.4'C, ice present, see overall comments. Security seal N/A.
Samples analysed within appropriate holding times?	Y	All samples were analysed within appropriate holding times.
Sample volumes sufficient for QC analysis?	Y	ALS: Sufficient sample volume was provided for all laboratory tests.
Are there non-NATA accredited methods used?	Y	ALS is not NATA accredited for ionic balance, see comments. All other methods used in this batch are accredited.
Chromatograms supplied as appropriate?	N/A	N/A.
Laboratory reports signed by authorised personnel?	Y	All reports signed.

QAQC Sample Information (Method Blank - MB, Rinsate Blank - RB, Field Blank - FB, Trip Blank - TB)

Type	Sample ID	Comments
MB	Method Blank	All results were below the LOR (ALS).

Trip Spike Information

Analyte	Control Spike Concentrations	Trip Spike Concentration	% Recovery	Comments
No TS was analysed for this batch.				

Laboratory Control Spike (LCS) Analyses

Analyte Group	Comments
All	All LCS recoveries are within the laboratory based DQIs (ALS).

Matrix Spike (MS) Analyses

Analyte Group	Comments
Sulfate	ALS: The MS recovery for sulfate (ED041G) was not determined in sample Anonymous (ES2308858-001). *Refer to overall comments.*
-	All other MS recoveries are within the laboratory based DQIs (ALS).

Laboratory Duplicates (LD) Analyses

Analyte Group	Sample ID	Comments
All	-	All LD RPDs are within the laboratory based DQIs (ALS).

Field Duplicates (FD) Analyses

Analyte Group	Primary ID	Duplicate ID	Comments
-	-	-	No FD taken in this batch.

Field Triplicates (FT) Analyses

Analyte Group	Primary ID	Triplicate ID	Comments
-	-	-	No FT taken in this batch.

Surrogate Compound Monitoring Analyses

Analyte Group	Analyte(s)	Comments
-	-	All surrogate recoveries are within acceptable DQIs (ALS).

Overall Comments

ALS: The sample receipt temperature reported by ALS was 16.4°C. The samples were collected and immediately placed in an esky with ice or ice bricks and sent to the laboratory. The elevated temperature may impact results for volatile and semi-volatile analytes and should be considered when interpreting the data.

ALS is not accredited for the reporting of ionic balance, total anions or total cations but is accredited for the analysis of the constituent ions. The lack of accreditation for anion-cation balance calculations is not considered to impact upon the integrity of the data set.

ALS:The MS recovery for sulfate (ED041G) was not determined in sample Anonymous (ES2308858-001). ALS states, "MS recovery not determined, background level greater than or equal to 4x spike level." This is not expected to effect the overall validity of this data set as the recoveries for other analytes by the same method were within the acceptable ranges.

This batch has been validated and is considered suitable for environmental interpretive use.

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

*When concentrations are less than the LOR for both primary and duplicate/triplicate results, no RPDs are calculated

Performed By:	**Grace Bendall-Pease**	**Checked By:**	**Ivan Ward**
Date:	**27/09/2023**	**Date:**	

GOLDER
MEMBER OF WSP

DATA VALIDATION SUMMARY SHEET (NSW)

Project Name:	**FCC Wetherill Park Quarterly**	**Project Number:**	**PS134467**
Primary Laboratory:	**ALS Sydney**	**Work Order Number:**	**ES2319357**
Date Sampled:	**9/06/2023**	**Sample Medium:**	**Water**

Sample Information

Number of Primary Samples:	**5**	**Number of Triplicate Samples:**	**0**
Number of Duplicate Samples:	**1**	**Number of Other QAQC Samples:**	**0**

Documentation and Sample Handling Information

	Y/N	Comments
COC completed properly?	Y	Signed by field staff and laboratory personnel.
All requested analysis completed?	Y	All requested analyses on the COC performed by ALS.
Samples received intact and chilled?	Y	ALS: 14.2'C, ice present, see overall comments. Security seal intact.
Samples analysed within appropriate holding times?	Y	All samples were analysed within appropriate holding times.
Sample volumes sufficient for QC analysis?	Y	ALS: Sufficient sample volume was provided for all laboratory tests.
Are there non-NATA accredited methods used?	Y	ALS is not NATA accredited for ionic balance, see comments. All other methods used in this batch are accredited.
Chromatograms supplied as appropriate?	N/A	N/A.
Laboratory reports signed by authorised personnel?	Y	All reports signed.

QAQC Sample Information (Method Blank - MB, Rinsate Blank - RB, Field Blank - FB, Trip Blank - TB)

Type	Sample ID	Comments
MB	Method Blank	All results were below the LOR (ALS).

Trip Spike Information

Analyte	Control Spike Concentrations	Trip Spike Concentration	% Recovery	Comments
No TS was analysed for this batch.				

Laboratory Control Spike (LCS) Analyses

Analyte Group	Comments
All	All LCS recoveries are within the laboratory based DQIs (ALS).

Matrix Spike (MS) Analyses

Analyte Group	Comments
Sulfate and Disolved Metals	ALS: The MS recoveries for sulfate (ED041G) was not determined in sample Anonymous (ES2319255-001) and Anonymous (ES2319428-009). The MS recovery for manganese was not determined in sample Anonymous (ES2319210-004). *Refer to overall comments.*
-	All other MS recoveries are within the laboratory based DQIs (ALS).

Laboratory Duplicates (LD) Analyses

Analyte Group	Sample ID	Comments
All	-	All LD RPDs are within the laboratory based DQIs (ALS).

Field Duplicates (FD) Analyses

Analyte Group	Primary ID	Duplicate ID	Comments
	-	-	All FD RPDs are within the DQIs.

Field Triplicates (FT) Analyses

Analyte Group	Primary ID	Triplicate ID	Comments
-	-	-	No FT taken in this batch.

Surrogate Compound Monitoring Analyses

Analyte Group	Analyte(s)	Comments
-	-	All surrogate recoveries are within acceptable DQIs (ALS).

Overall Comments

ALS: The sample receipt temperature reported by ALS was 14.2°C. The samples were collected and immediately placed in an esky with ice or ice bricks and sent to the laboratory. The elevated temperature may impact results for volatile and semi-volatile analytes and should be considered when interpreting the data.

ALS is not accredited for the reporting of ionic balance, total anions or total cations but is accredited for the analysis of the constituent ions. The lack of accreditation for anion-cation balance calculations is not considered to impact upon the integrity of the data set.

ALS: The MS recoveries for sulfate (ED041G) was not determined in sample Anonymous (ES2319255-001) and Anonymous (ES2319428-009). The MS recovery for manganese was not determined in sample Anonymous (ES2319210-004). ALS states, "MS recovery not determined, background level greater than or equal to 4x spike level." This is not expected to effect the overall validity of this data set as the recoveries for other analytes by the same method were within the acceptable ranges.

This batch has been validated and is considered suitable for environmental interpretive use.

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

*When concentrations are less than the LOR for both primary and duplicate/triplicate results, no RPDs are calculated

Performed By:	**Grace Bendall-Pease**	**Checked By:**	**Ivan Ward**
Date:	**27/09/2023**	**Date:**	

Appendix D

Laboratory Certificates

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2209049**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 15-Sep-2022 16:00
Order number	: 117623088/3/309	Date Analysis Commenced	: 19-Sep-2022
C-O-C number	: ----	Issue Date	: 27-Sep-2022 17:18
Sampler	: S L		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. 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.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)				Sample ID	DDG1 17/08/22 - 14/09/22	DDG2 17/08/22 - 14/09/22	DDG3 17/08/22 - 14/09/22	DDG4 17/08/22 - 14/09/22	DDG5 17/08/22 - 14/09/22
				Sampling date / time	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00
Compound	*CAS Number*	*LOR*	*Unit*		**EN2209049-001**	**EN2209049-002**	**EN2209049-003**	**EN2209049-004**	**EN2209049-005**
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**2.3**	**2.1**	**1.3**	**1.0**	**1.6**
Ash Content (mg)	----	2	mg		**38**	**34**	**21**	**17**	**26**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.6**	**0.4**	**0.2**	**0.5**	**0.6**
Combustible Matter (mg)	----	2	mg		**10**	**8**	**3**	**8**	**11**
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**2.9**	**2.5**	**1.5**	**1.5**	**2.2**
Total Insoluble Matter (mg)	----	2	mg		**48**	**42**	**24**	**25**	**37**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2209970**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 12-Oct-2022 14:00
Order number	: TBA	Date Analysis Commenced	: 13-Oct-2022
C-O-C number	: ----	Issue Date	: 21-Oct-2022 18:17
Sampler	: S L		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)				Sample ID	DDG1 14/09/22 - 12/10/22	DDG2 14/09/22 - 12/10/22	DDG3 14/09/22 - 12/10/22	DDG4 14/09/22 - 12/10/22	DDG5 14/09/22 - 12/10/22
				Sampling date / time	12-Oct-2022 00:00	12-Oct-2022 00:00	12-Oct-2022 00:00	12-Oct-2022 00:00	12-Oct-2022 00:00
Compound	CAS Number	LOR	Unit		EN2209970-001	EN2209970-002	EN2209970-003	EN2209970-004	EN2209970-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**1.8**	**1.5**	**0.7**	**1.5**	**1.4**
Ash Content (mg)	----	2	mg		**30**	**24**	**12**	**24**	**23**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**1.2**	**1.2**	**0.5**	**1.0**	**1.4**
Combustible Matter (mg)	----	2	mg		**19**	**20**	**8**	**18**	**24**
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**3.0**	**2.7**	**1.2**	**2.5**	**2.8**
Total Insoluble Matter (mg)	----	2	mg		**49**	**44**	**20**	**42**	**47**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2211206**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 18-Nov-2022 15:00
Order number	: TBA	Date Analysis Commenced	: 21-Nov-2022
C-O-C number	: ----	Issue Date	: 29-Nov-2022 17:17
Sampler	: S L		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is 37 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)			Sample ID	**DDG1** 12/10/22 - 18/11/22	**DDG2** 12/10/22 - 18/11/22	**DDG3** 12/10/22 - 18/11/22	**DDG4** 12/10/22 - 18/11/22	**DDG5** 12/10/22 - 18/11/22
			Sampling date / time	18-Nov-2022 00:00	18-Nov-2022 00:00	18-Nov-2022 00:00	18-Nov-2022 00:00	18-Nov-2022 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EN2211206-001**	**EN2211206-002**	**EN2211206-003**	**EN2211206-004**	**EN2211206-005**
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	**0.1**	**1.3**	**0.3**	**0.6**	**0.8**
Ash Content (mg)	----	2	mg	**2**	**28**	**7**	**13**	**17**
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	<0.1	**1.4**	**0.4**	**0.9**	**0.9**
Combustible Matter (mg)	----	2	mg	<2	**30**	**9**	**19**	**19**
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**0.1**	**2.7**	**0.7**	**1.5**	**1.7**
Total Insoluble Matter (mg)	----	2	mg	**2**	**58**	**16**	**32**	**36**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2212126**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 13-Dec-2022 17:00
Order number	: 117623088	Date Analysis Commenced	: 19-Dec-2022
C-O-C number	: ----	Issue Date	: 30-Dec-2022 08:51
Sampler	: MW		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- General Comments
- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Laboratory Operator	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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.

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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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is 24 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)			Sample ID	**DDG1 18/11/22 - 12/12/22**	**DDG2 18/11/22 - 12/12/22**	**DDG3 18/11/22 - 12/12/22**	**DDG4 18/11/22 - 12/12/22**	**DDG5 18/11/22 - 12/12/22**
			Sampling date / time	12-Dec-2022 00:00	12-Dec-2022 00:00	12-Dec-2022 00:00	12-Dec-2022 00:00	12-Dec-2022 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EN2212126-001**	**EN2212126-002**	**EN2212126-003**	**EN2212126-004**	**EN2212126-005**
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	**2.1**	**3.3**	**1.8**	**2.8**	**1.5**
Ash Content (mg)	----	2	mg	**30**	**46**	**25**	**40**	**21**
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	**0.7**	**1.1**	**1.2**	**3.3**	**1.3**
Combustible Matter (mg)	----	2	mg	**10**	**16**	**17**	**46**	**18**
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**2.8**	**4.4**	**3.0**	**6.1**	**2.8**
Total Insoluble Matter (mg)	----	2	mg	**40**	**62**	**42**	**86**	**39**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2300419**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 13-Jan-2023 14:20
Order number	: 117623088	Date Analysis Commenced	: 17-Jan-2023
C-O-C number	: ----	Issue Date	: 24-Jan-2023 17:34
Sampler	: IVAN WARD		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

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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 Contract for details.

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^ = 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)				Sample ID	DDG1 12/12/22-13/01/23	DDG2 12/12/22-13/01/23	DDG3 12/12/22-13/01/23	DDG4 12/12/22-13/01/23	DDG5 12/12/22-13/01/23
				Sampling date / time	13-Jan-2023 00:00	13-Jan-2023 00:00	13-Jan-2023 00:00	13-Jan-2023 00:00	13-Jan-2023 00:00
Compound	*CAS Number*	*LOR*	*Unit*		**EN2300419-001**	**EN2300419-002**	**EN2300419-003**	**EN2300419-004**	**EN2300419-005**
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**0.1**	**2.2**	**0.9**	**1.3**	**0.5**
Ash Content (mg)	----	2	mg		**2**	**42**	**17**	**24**	**9**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		<0.1	**0.8**	**0.5**	**2.5**	**0.6**
Combustible Matter (mg)	----	2	mg		<2	**15**	**10**	**48**	**12**
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**0.1**	**3.0**	**1.4**	**3.8**	**1.1**
Total Insoluble Matter (mg)	----	2	mg		**2**	**57**	**27**	**72**	**21**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2301628**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 17-Feb-2023 15:00
Order number	: TBA	Date Analysis Commenced	: 21-Feb-2023
C-O-C number	: ----	Issue Date	: 28-Feb-2023 13:44
Sampler	: ----		
Site	:		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Laboratory Operator	Newcastle - Inorganics, Mayfield West, NSW

General Comments

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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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is 35 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)			Sample ID	**DDG1 13/1/23-17/2/23**	**DDG2 13/1/23-17/2/23**	**DDG3 13/1/23-17/2/23**	**DDG4 13/1/23-17/2/23**	**DDG5 13/1/23-17/2/23**
			Sampling date / time	17-Feb-2023 00:00	17-Feb-2023 00:00	17-Feb-2023 00:00	17-Feb-2023 00:00	17-Feb-2023 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EN2301628-001**	**EN2301628-002**	**EN2301628-003**	**EN2301628-004**	**EN2301628-005**
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	**0.9**	**1.5**	**1.6**	**2.1**	**0.6**
Ash Content (mg)	----	2	mg	**19**	**30**	**34**	**43**	**12**
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	**0.3**	**0.3**	**0.4**	**1.6**	**0.5**
Combustible Matter (mg)	----	2	mg	**5**	**8**	**8**	**33**	**11**
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**1.2**	**1.8**	**2.0**	**3.7**	**1.1**
Total Insoluble Matter (mg)	----	2	mg	**24**	**38**	**42**	**76**	**23**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2302603**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 14-Mar-2023 17:00
Order number	: TBA	Date Analysis Commenced	: 15-Mar-2023
C-O-C number	: ----	Issue Date	: 24-Mar-2023 15:47
Sampler	: Grace Bendall-Pease		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. 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.

Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Laboratory Operator	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is 25 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)			Sample ID	**DDG1** 17/02/23 - 14/03/23	**DDG2** 17/02/23 - 14/03/23	**DDG3** 17/02/23 - 14/03/23	**DDG4** 17/02/23 - 14/03/23	**DDG5** 17/02/23 - 14/03/23
			Sampling date / time	14-Mar-2023 00:00	14-Mar-2023 00:00	14-Mar-2023 00:00	14-Mar-2023 00:00	14-Mar-2023 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EN2302603-001**	**EN2302603-002**	**EN2302603-003**	**EN2302603-004**	**EN2302603-005**
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	**1.2**	**3.3**	**0.4**	**1.4**	**0.4**
Ash Content (mg)	----	2	mg	**17**	**49**	**6**	**20**	**6**
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	**0.4**	**0.6**	**0.1**	**1.7**	**0.2**
Combustible Matter (mg)	----	2	mg	**7**	**9**	**2**	**26**	**3**
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**1.6**	**3.9**	**0.5**	**3.1**	**0.6**
Total Insoluble Matter (mg)	----	2	mg	**24**	**58**	**8**	**46**	**9**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2303815**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 14-Apr-2023 17:00
Order number	: TBA	Date Analysis Commenced	: 18-Apr-2023
C-O-C number	: ----	Issue Date	: 27-Apr-2023 16:47
Sampler	: Grace Bendall-Pease		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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Signatories

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Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Team Leader - Chemistry	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 14/03/23 - 14/04/23	DDG2 14/03/23 - 14/04/23	DDG3 14/03/23 - 14/04/23	DDG4 14/03/23 - 14/04/23	DDG5 14/03/23 - 14/04/23
			Sampling date / time	14-Apr-2023 00:00	14-Apr-2023 00:00	14-Apr-2023 00:00	14-Apr-2023 00:00	14-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	EN2303815-001	EN2303815-002	EN2303815-003	EN2303815-004	EN2303815-005
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	2.3	2.9	0.5	1.5	0.5
Ash Content (mg)	----	2	mg	42	53	10	28	10
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	0.8	0.9	0.3	1.5	0.4
Combustible Matter (mg)	----	2	mg	15	16	5	27	6
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	3.1	3.8	0.8	3.0	0.9
Total Insoluble Matter (mg)	----	2	mg	57	69	15	55	16

CERTIFICATE OF ANALYSIS

Work Order	: **EN2305097**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 18-May-2023 17:00
Order number	: PS132626	Date Analysis Commenced	: 23-May-2023
C-O-C number	: ----	Issue Date	: 30-May-2023 18:29
Sampler	: SL		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Team Leader - Chemistry	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract for details.

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~ = Indicates an estimated value.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is 33 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 14/04/23 - 17/05/23	DDG2 14/04/23 - 17/05/23	DDG3 14/04/23 - 17/05/23	DDG4 14/04/23 - 17/05/23	DDG5 14/04/23 - 17/05/23
			Sampling date / time	17-May-2023 00:00	17-May-2023 00:00	17-May-2023 00:00	17-May-2023 00:00	17-May-2023 00:00
Compound	CAS Number	LOR	Unit	EN2305097-001	EN2305097-002	EN2305097-003	EN2305097-004	EN2305097-005
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	2.1	0.8	1.1	2.3	0.4
Ash Content (mg)	----	2	mg	40	15	21	44	8
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	0.9	0.5	0.6	1.7	0.4
Combustible Matter (mg)	----	2	mg	19	11	13	34	8
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	3.0	1.3	1.7	4.0	0.8
Total Insoluble Matter (mg)	----	2	mg	59	26	34	78	16

CERTIFICATE OF ANALYSIS

Work Order	: **EN2307149**	Page	: 1 of 3
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: PS134467	Date Samples Received	: 17-Jul-2023 11:57
Order number	: PO30304	Date Analysis Commenced	: 19-Jul-2023
C-O-C number	: ----	Issue Date	: 25-Jul-2023 18:12
Sampler	: GBP		
Site	: Wetherill Park SRC		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Team Leader - Chemistry	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- No copper sulfate correction was applied to sample(s) 001, 003, 004
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 09/06/23 - 10/07/23	DDG2 09/06/23 - 10/07/23	DDG3 09/06/23 - 10/07/23	DDG4 09/06/23 - 10/07/23	DDG5 09/06/23 - 10/07/23
			Sampling date / time	10-Jul-2023 00:00	10-Jul-2023 00:00	10-Jul-2023 00:00	10-Jul-2023 00:00	10-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	EN2307149-001	EN2307149-002	EN2307149-003	EN2307149-004	EN2307149-005
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	1.9	0.4	0.8	1.9	0.6
Ash Content (mg)	----	2	mg	34	8	14	35	11
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	0.5	<0.1	0.2	0.6	0.3
Combustible Matter (mg)	----	2	mg	9	<2	5	11	6
EA139: Total Soluble Matter								
Total Soluble Matter	----	0.1	g/m².month	1.4	0.1	2.0	2.5	0.3
Total Soluble Matter (mg)	----	2	mg	26	2	37	46	5
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	2.4	0.4	1.0	2.5	0.9
Total Insoluble Matter (mg)	----	2	mg	43	8	19	46	17
EA142: Total Solids								
Total Solids	----	0.1	g/m².month	3.8	0.5	3.0	5.0	1.2
Total Solids (mg)	----	2	mg	69	10	56	92	22

CERTIFICATE OF ANALYSIS

Work Order	: **EN2308226**	Page	: 1 of 3
Client	: **WSP Australia Pty Ltd**	Laboratory	: Environmental Division Newcastle
Contact	: Ivan Ward	Contact	:
Address	: LEVEL 27 680 GEORGE STREET SYDNEY 2000	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: PS134467	Date Samples Received	: 15-Aug-2023 17:00
Order number	: PM Contacted for PO	Date Analysis Commenced	: 17-Aug-2023
C-O-C number	: ----	Issue Date	: 28-Aug-2023 11:57
Sampler	: THOMAS GILLAN		
Site	: ----		
Quote number	: EN/008/21		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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Signatories

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Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Team Leader - Chemistry	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited. ALS Mudgee laboratory is NATA accredited for dust sampling, therefore ALS Mudgee reported deposition units are accredited.
- Sample exposure period is 36 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)

Compound	CAS Number	LOR	Unit	Sample ID	DDG 1 10/07/23 - 15/08/23	DDG 2 10/07/23 - 15/08/23	DDG 3 10/07/23 - 15/08/23	DDG 4 10/07/23 - 15/08/23	DDG 5 10/07/23 - 15/08/23
				Sampling date / time	15-Aug-2023 00:00	15-Aug-2023 00:00	15-Aug-2023 00:00	15-Aug-2023 00:00	15-Aug-2023 00:00
					EN2308226-001	EN2308226-002	EN2308226-003	EN2308226-004	EN2308226-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**2.7**	**0.6**	**1.0**	**1.9**	**0.5**
Ash Content (mg)	----	2	mg		**57**	**12**	**21**	**40**	**11**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**1.1**	**0.3**	**0.4**	**0.8**	**0.3**
Combustible Matter (mg)	----	2	mg		**24**	**7**	**8**	**17**	**6**
EA139: Total Soluble Matter									
Total Soluble Matter	----	0.1	g/m².month		**4.4**	**0.2**	**0.2**	**0.6**	**3.1**
Total Soluble Matter (mg)	----	2	mg		**93**	**3**	**4**	**12**	**65**
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**3.8**	**0.9**	**1.4**	**2.7**	**0.8**
Total Insoluble Matter (mg)	----	2	mg		**81**	**19**	**29**	**57**	**17**
EA142: Total Solids									
Total Solids	----	0.1	g/m².month		**8.2**	**1.1**	**1.6**	**3.3**	**3.9**
Total Solids (mg)	----	2	mg		**174**	**22**	**33**	**69**	**82**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2309424**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 15-Sep-2023 17:00
Order number	: 117623088	Date Analysis Commenced	: 22-Sep-2023
C-O-C number	: ----	Issue Date	: 26-Sep-2023 14:27
Sampler	: GBP		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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- Analytical Results

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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.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

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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.

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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.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- No copper sulfate correction was applied to sample #003.
- EA139 Total Soluble Matter and EA142 Total Solids was unable to be reported for sample 004 (DDG4) due to a laboratory error.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 15/08/23 - 14/09/23	DDG2 15/08/23 - 14/09/23	DDG3 15/08/23 - 14/09/23	DDG4 15/08/23 - 14/09/23	DDG5 15/08/23 - 14/09/23
			Sampling date / time	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00
Compound	CAS Number	LOR	Unit	EN2309424-001	EN2309424-002	EN2309424-003	EN2309424-004	EN2309424-005
				Result	Result	Result	Result	Result
EA139: Total Soluble Matter								
Total Soluble Matter	----	0.1	g/m².month	<0.1	**0.1**	**2.5**	**----**	<0.1
Total Soluble Matter (mg)	----	2	mg	<2	<2	**44**	**----**	<2
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**1.0**	**1.1**	**1.6**	**1.5**	**1.0**
Total Insoluble Matter (mg)	----	2	mg	**18**	**19**	**29**	**26**	**17**
EA142: Total Solids								
Total Solids	----	0.1	g/m².month	**1.0**	**1.2**	**4.1**	**----**	**1.0**
Total Solids (mg)	----	2	mg	**18**	**20**	**73**	**----**	**17**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2232971**	Page	: 1 of 6
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088	Date Samples Received	: 14-Sep-2022 15:10
Order number	: 117623088/3	Date Analysis Commenced	: 15-Sep-2022
C-O-C number	: ----	Issue Date	: 21-Sep-2022 16:28
Sampler	: Sharna Little.		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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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 Contract 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.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP074: The results for sample ES2232971-005 was confirmed by re-analysis.
- EG020: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	GW1	GW3	GW4	SW1	SW2
			Sampling date / time	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00
Compound	CAS Number	LOR	Unit	ES2232971-001	ES2232971-002	ES2232971-003	ES2232971-004	ES2232971-005
				Result	Result	Result	Result	Result
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	**----**	**----**	**----**	**33**	**462**
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**509**	**899**	**840**	**246**	**124**
Total Alkalinity as CaCO3	----	1	mg/L	**509**	**899**	**840**	**246**	**124**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**58**	**114**	**553**	**98**	**13**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**95**	**999**	**3960**	**384**	**51**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**117**	**26**	**38**	**49**	**23**
Magnesium	7439-95-4	1	mg/L	**37**	**70**	**350**	**42**	**12**
Sodium	7440-23-5	1	mg/L	**108**	**938**	**2240**	**244**	**42**
Potassium	7440-09-7	1	mg/L	**13**	**2**	**21**	**7**	**4**
EG020F: Dissolved Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	**0.131**	**0.176**	**1.86**	**0.001**	**0.206**
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	**0.68**
EG020T: Total Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	**0.409**	**0.486**	**1.82**	**0.257**	**0.331**
Iron	7439-89-6	0.05	mg/L	**1.18**	**13.5**	**0.48**	**0.62**	**10.1**
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	**0.2**	**0.7**	**0.6**	**0.7**	**0.3**
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**1.77**	**0.23**	**0.48**	**0.34**	**0.46**
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	**0.05**	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	**0.06**	**0.03**	**2.20**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	**0.06**	**0.03**	**2.25**	<0.01
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**14.0**	**48.5**	**140**	**17.8**	**4.19**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	GW1	GW3	GW4	SW1	SW2
			Sampling date / time	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00
Compound	CAS Number	LOR	Unit	ES2232971-001	ES2232971-002	ES2232971-003	ES2232971-004	ES2232971-005
				Result	Result	Result	Result	Result
EN055: Ionic Balance - Continued								
ø Total Cations	----	0.01	meq/L	13.9	47.9	129	16.7	4.06
ø Ionic Balance	----	0.01	%	0.51	0.63	4.22	3.17	1.48
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	22	24	34	19	28
EP020: Oil and Grease (O&G)								
Oil & Grease	----	5	mg/L	----	----	----	<5	107
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	<5	<5
1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	<5	<5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	<50	<50
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	<50	<50
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	<50	<50
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	<50	<50
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	<50	<50
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	<50	<50
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	<5	<5
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	<5	<5
1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	<5	<5
1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	<5	<5
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	<5	<5
1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	<5	<5
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	<5	<5
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	<5	<5
1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	<5	<5
Tetrachloroethene	127-18-4	5	µg/L	<5	5	<5	<5	<5
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	<5	<5

Analytical Results

Sub-Matrix: **GROUNDWATER** (Matrix: **WATER**)

Compound	CAS Number	LOR	Unit	Sample ID	GW1	GW3	GW4	SW1	SW2
				Sampling date / time	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00	14-Sep-2022 00:00
					ES2232971-001	ES2232971-002	ES2232971-003	ES2232971-004	ES2232971-005
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	<5	<5
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	<5	<5
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	<5	<5
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	<5	<5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	<5	<5
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	<5	<5
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	<5	<5
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	<5	<5
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	<5	<5
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	<5	<5
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	<5	<5
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	<5	<5
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	<5	<5
Bromoform	75-25-2	5	µg/L		<5	<5	<5	<5	<5
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**115**	**114**	**112**	**107**	**115**
Toluene-D8	2037-26-5	5	%		**110**	**111**	**109**	**103**	**98.1**
4-Bromofluorobenzene	460-00-4	5	%		**112**	**115**	**113**	**101**	**119**

Surrogate Control Limits

Sub-Matrix: **GROUNDWATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2244848**	Page	: 1 of 6
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088	Date Samples Received	: 12-Dec-2022 14:40
Order number	: 117623088/3	Date Analysis Commenced	: 14-Dec-2022
C-O-C number	: ----	Issue Date	: 21-Dec-2022 16:58
Sampler	: MW		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

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^ = 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.

- ED041G: LOR raised for Sulfate on sample 1 due to sample matrix.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EG020: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GW3	GW4	SW2	----	----
			Sampling date / time	12-Dec-2022 00:00	12-Dec-2022 00:00	12-Dec-2022 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2244848-001	ES2244848-002	ES2244848-003	--------	--------
				Result	Result	Result	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	----	----	34	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	948	948	50	----	----
Total Alkalinity as CaCO3	----	1	mg/L	948	948	50	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<10	319	74	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	700	1800	42	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	93	10	22	----	----
Magnesium	7439-95-4	1	mg/L	114	123	8	----	----
Sodium	7440-23-5	1	mg/L	508	1400	44	----	----
Potassium	7440-09-7	1	mg/L	10	13	4	----	----
EG020F: Dissolved Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	0.118	1.26	0.075	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.17	----	----
EG020T: Total Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	0.133	1.45	0.078	----	----
Iron	7439-89-6	0.05	mg/L	11.7	0.96	0.68	----	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	0.6	0.7	0.2	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	6.63	0.57	0.28	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.01	0.19	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.09	<0.01	0.35	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.09	0.01	0.54	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	38.7	76.4	3.72	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GW3	GW4	SW2	----	----
			Sampling date / time	12-Dec-2022 00:00	12-Dec-2022 00:00	12-Dec-2022 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2244848-001	ES2244848-002	ES2244848-003	--------	--------
				Result	Result	Result	----	----
EN055: Ionic Balance - Continued								
ø Total Cations	----	0.01	meq/L	**36.4**	**71.8**	**3.77**	----	----
ø Ionic Balance	----	0.01	%	**3.08**	**3.04**	**0.64**	----	----
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	**124**	**32**	**27**	----	----
EP020: Oil and Grease (O&G)								
Oil & Grease	----	5	mg/L	----	----	**10**	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	----	----
1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	----	----
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	----	----
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	----	----
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	----	----
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	----	----
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	----	----
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	----	----
1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	----	----
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	----	----
1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	----	----
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	----	----
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	----	----
1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	----	----
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	**45**	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GW3	GW4	SW2	----	----
				Sampling date / time	12-Dec-2022 00:00	12-Dec-2022 00:00	12-Dec-2022 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2244848-001	ES2244848-002	ES2244848-003	--------	--------
					Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	----	----
Bromoform	75-25-2	5	µg/L		<5	<5	<5	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**112**	**119**	**118**	----	----
Toluene-D8	2037-26-5	5	%		**120**	**114**	**109**	----	----
4-Bromofluorobenzene	460-00-4	5	%		**116**	**121**	**114**	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2309067**	Page	: 1 of 6
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088	Date Samples Received	: 20-Mar-2023 15:20
Order number	: 117623088/3	Date Analysis Commenced	: 21-Mar-2023
C-O-C number	: ----	Issue Date	: 27-Mar-2023 13:49
Sampler	: GRACE BP		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 Contract 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.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GW1	GW3	GW4	----	----
			Sampling date / time	20-Mar-2023 00:00	20-Mar-2023 00:00	20-Mar-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2309067-001	ES2309067-002	ES2309067-003	--------	--------
				Result	Result	Result	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**50**	**45**	**41**	----	----
Total Alkalinity as CaCO3	----	1	mg/L	**50**	**45**	**41**	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**4**	**8**	**8**	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**16**	**26**	**27**	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**17**	**17**	**17**	----	----
Magnesium	7439-95-4	1	mg/L	**2**	**3**	**3**	----	----
Sodium	7440-23-5	1	mg/L	**13**	**9**	**9**	----	----
Potassium	7440-09-7	1	mg/L	**1**	**1**	**2**	----	----
EG020F: Dissolved Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	----	----
EG020T: Total Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	<0.001	**0.001**	**0.001**	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	----	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	**1.1**	**0.9**	**1.1**	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.34**	**0.29**	**0.28**	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	**0.02**	<0.01	<0.01	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.14**	**0.13**	**0.14**	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.16**	**0.13**	**0.14**	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**1.53**	**1.80**	**1.75**	----	----
ø Total Cations	----	0.01	meq/L	**1.60**	**1.51**	**1.54**	----	----
EP005: Total Organic Carbon (TOC)								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GW1	GW3	GW4	----	----
			Sampling date / time	20-Mar-2023 00:00	20-Mar-2023 00:00	20-Mar-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2309067-001	ES2309067-002	ES2309067-003	--------	--------
				Result	Result	Result	----	----
EP005: Total Organic Carbon (TOC) - Continued								
Total Organic Carbon	----	1	mg/L	**2**	**2**	**2**	**----**	**----**
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	**----**	**----**
1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	**----**	**----**
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	**----**	**----**
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	**----**	**----**
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	**----**	**----**
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	**----**	**----**
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	**----**	**----**
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	**----**	**----**
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	**----**	**----**
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	**----**	**----**
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	**----**	**----**
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	**----**	**----**
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	**----**	**----**
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	**----**	**----**
1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	**----**	**----**
cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	**----**	**----**
1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	**----**	**----**
1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	**----**	**----**
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	**----**	**----**
1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	**----**	**----**
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	**----**	**----**
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	**----**	**----**
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	**----**	**----**
1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	**----**	**----**
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	<5	**----**	**----**
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	**----**	**----**
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	<5	**----**	**----**
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	<5	**----**	**----**
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	<5	**----**	**----**
1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	<5	**----**	**----**
Pentachloroethane	76-01-7	5	µg/L	<5	<5	<5	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	----	----
				Sampling date / time	20-Mar-2023 00:00	20-Mar-2023 00:00	20-Mar-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2309067-001	ES2309067-002	ES2309067-003	--------	--------
					Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		**26**	**27**	**26**	----	----
Bromodichloromethane	75-27-4	5	µg/L		**6**	**6**	**5**	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	----	----
Bromoform	75-25-2	5	µg/L		<5	<5	<5	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**100**	**87.2**	**105**	----	----
Toluene-D8	2037-26-5	5	%		**103**	**91.6**	**104**	----	----
4-Bromofluorobenzene	460-00-4	5	%		**93.5**	**82.6**	**96.2**	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

CERTIFICATE OF ANALYSIS

Work Order	: **ES2319357**	Page	: 1 of 9
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088	Date Samples Received	: 09-Jun-2023 14:10
Order number	: 117623088/3	Date Analysis Commenced	: 09-Jun-2023
C-O-C number	: ----	Issue Date	: 15-Jun-2023 21:21
Sampler	: GB-P and JP		
Site	:		
Quote number	: EN/002		
No. of samples received	: 6		
No. of samples analysed	: 6		

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

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Signatories

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Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

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ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EK059G:NOx results confirmed by re analysis for sample #5 and 6
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	----	----
				Sampling date / time	09-Jun-2023 00:00	09-Jun-2023 00:00	09-Jun-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2319357-001	ES2319357-002	ES2319357-003	--------	--------
					Result	Result	Result	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		454	1140	932	----	----
Total Alkalinity as CaCO3	----	1	mg/L		454	1140	932	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		81	167	417	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		154	1300	2340	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		103	28	13	----	----
Magnesium	7439-95-4	1	mg/L		35	90	168	----	----
Sodium	7440-23-5	1	mg/L		119	1180	1640	----	----
Potassium	7440-09-7	1	mg/L		12	1	13	----	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.156	0.335	1.59	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	----	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.240	0.501	2.48	----	----
Iron	7439-89-6	0.05	mg/L		3.39	13.8	0.84	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		0.3	0.8	<0.1	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		2.62	0.35	0.39	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	0.05	0.01	----	----
Nitrate as NO3	14797-55-8	0.05	mg/L		<0.05	0.22	<0.05	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	0.05	0.01	----	----
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		15.1	62.9	93.3	----	----
ø Total Cations	----	0.01	meq/L		13.5	60.2	86.1	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	----	----
				Sampling date / time	09-Jun-2023 00:00	09-Jun-2023 00:00	09-Jun-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2319357-001	ES2319357-002	ES2319357-003	--------	--------
					Result	Result	Result	----	----
EN055: Ionic Balance - Continued									
ø Ionic Balance	----	0.01	%		**5.59**	**2.25**	**3.99**	**----**	**----**
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**14**	**23**	**14**	**----**	**----**
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<5	<5	----	----
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<5	<5	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<5	<5	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<5	<5	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	<5	<5	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	<50	<50	----	----
Chloromethane	74-87-3	50	µg/L		<50	<50	<50	----	----
Vinyl chloride	75-01-4	50	µg/L		<50	<50	<50	----	----
Bromomethane	74-83-9	50	µg/L		<50	<50	<50	----	----
Chloroethane	75-00-3	50	µg/L		<50	<50	<50	----	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	<50	<50	----	----
1.1-Dichloroethene	75-35-4	5	µg/L		<5	<5	<5	----	----
Iodomethane	74-88-4	5	µg/L		<5	<5	<5	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<5	<5	----	----
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	<5	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	<5	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	<5	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	<5	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	<5	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	<5	----	----
Trichloroethene	79-01-6	5	µg/L		<5	<5	<5	----	----
Dibromomethane	74-95-3	5	µg/L		<5	<5	<5	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	<5	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	<5	----	----
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	<5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	<5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	----	----
				Sampling date / time	09-Jun-2023 00:00	09-Jun-2023 00:00	09-Jun-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2319357-001	ES2319357-002	ES2319357-003	--------	--------
					Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	----	----
Bromoform	75-25-2	5	µg/L		<5	<5	<5	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**112**	**114**	**121**	----	----
Toluene-D8	2037-26-5	5	%		**113**	**118**	**124**	----	----
4-Bromofluorobenzene	460-00-4	5	%		**108**	**111**	**116**	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	QC100	----	----
				Sampling date / time	09-Jun-2023 00:00	09-Jun-2023 00:00	09-Jun-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2319357-004	ES2319357-005	ES2319357-006	--------	--------
					Result	Result	Result	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		271	280	276	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		109	122	118	----	----
Total Alkalinity as CaCO3	----	1	mg/L		109	122	118	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		25	24	21	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		75	129	128	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		23	29	29	----	----
Magnesium	7439-95-4	1	mg/L		12	11	11	----	----
Sodium	7440-23-5	1	mg/L		49	89	88	----	----
Potassium	7440-09-7	1	mg/L		3	11	11	----	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.019	0.402	0.397	----	----
Iron	7439-89-6	0.05	mg/L		0.07	16.5	16.6	----	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.091	0.419	0.448	----	----
Iron	7439-89-6	0.05	mg/L		0.52	17.6	19.2	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		<0.1	<0.1	0.4	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.30	0.45	0.41	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		0.06	0.20	0.19	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.10	0.43	<0.01	----	----
Nitrate as NO3	14797-55-8	0.05	mg/L		0.44	1.90	<0.05	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		0.16	0.63	<0.01	----	----
EN055: Ionic Balance									

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	SW1	SW2	QC100	----	----
			Sampling date / time	09-Jun-2023 00:00	09-Jun-2023 00:00	09-Jun-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2319357-004	ES2319357-005	ES2319357-006	--------	--------
				Result	Result	Result	----	----
EN055: Ionic Balance - Continued								
ø Total Anions	----	0.01	meq/L	**4.81**	**6.58**	**6.40**	**----**	**----**
ø Total Cations	----	0.01	meq/L	**4.34**	**6.50**	**6.46**	**----**	**----**
ø Ionic Balance	----	0.01	%	**5.14**	**0.54**	**0.43**	**----**	**----**
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	**10**	**1940**	**1910**	**----**	**----**
EP020: Oil and Grease (O&G)								
Oil & Grease	----	5	mg/L	<5	**124**	**128**	**----**	**----**
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	**----**	**----**
1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	**----**	**----**
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	**----**	**----**
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	**----**	**----**
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	**----**	**----**
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	**----**	**----**
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	**----**	**----**
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	**----**	**----**
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	**----**	**----**
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	**----**	**----**
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	**----**	**----**
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	**----**	**----**
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	**----**	**----**
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	**----**	**----**
1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	**----**	**----**
cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	**----**	**----**
1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	**----**	**----**
1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	**----**	**----**
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	**----**	**----**
1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	**----**	**----**
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	**----**	**----**
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	**----**	**----**
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	**----**	**----**
1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	**----**	**----**
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	<5	**----**	**----**

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	QC100	----	----
				Sampling date / time	09-Jun-2023 00:00	09-Jun-2023 00:00	09-Jun-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2319357-004	ES2319357-005	ES2319357-006	--------	--------
					Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	<5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	----	----
Bromoform	75-25-2	5	µg/L		<5	<5	<5	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		87.4	96.4	96.7	----	----
Toluene-D8	2037-26-5	5	%		119	122	123	----	----
4-Bromofluorobenzene	460-00-4	5	%		110	117	121	----	----

Surrogate Control Limits

Sub-Matrix: **GROUNDWATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

Sub-Matrix: **SURFACE WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

Appendix E

Important Information

The document ("Report") to which this page is attached and which this page forms a part of, has been issued by Golder Associates Pty Ltd ("Golder") subject to the important limitations and other qualifications set out below.

This Report constitutes or is part of services ("Services") provided by Golder to its client ("Client") under and subject to a contract between Golder and its Client ("Contract"). The contents of this page are not intended to and do not alter Golder's obligations (including any limits on those obligations) to its Client under the Contract.

This Report is provided for use solely by Golder's Client and persons acting on the Client's behalf, such as its professional advisers. Golder is responsible only to its Client for this Report. Golder has no responsibility to any other person who relies or makes decisions based upon this Report or who makes any other use of this Report. Golder accepts no responsibility for any loss or damage suffered by any person other than its Client as a result of any reliance upon any part of this Report, decisions made based upon this Report or any other use of it.

This Report has been prepared in the context of the circumstances and purposes referred to in, or derived from, the Contract and Golder accepts no responsibility for use of the Report, in whole or in part, in any other context or circumstance or for any other purpose.

The scope of Golder's Services and the period of time they relate to are determined by the Contract and are subject to restrictions and limitations set out in the Contract. If a service or other work is not expressly referred to in this Report, do not assume that it has been provided or performed. If a matter is not addressed in this Report, do not assume that any determination has been made by Golder in regards to it.

At any location relevant to the Services conditions may exist which were not detected by Golder, in particular due to the specific scope of the investigation Golder has been engaged to undertake. Conditions can only be verified at the exact location of any tests undertaken. Variations in conditions may occur between tested locations and there may be conditions which have not been revealed by the investigation and which have not therefore been taken into account in this Report.

Golder accepts no responsibility for and makes no representation as to the accuracy or completeness of the information provided to it by or on behalf of the Client or sourced from any third party. Golder has assumed that such information is correct unless otherwise stated and no responsibility is accepted by Golder for incomplete or inaccurate data supplied by its Client or any other person for whom Golder is not responsible. Golder has not taken account of matters that may have existed when the Report was prepared but which were only later disclosed to Golder.

Having regard to the matters referred to in the previous paragraphs on this page in particular, carrying out the Services has allowed Golder to form no more than an opinion as to the actual conditions at any relevant location. That opinion is necessarily constrained by the extent of the information collected by Golder or otherwise made available to Golder. Further, the passage of time may affect the accuracy, applicability or usefulness of the opinions, assessments or other information in this Report. This Report is based upon the information and other circumstances that existed and were known to Golder when the Services were performed and this Report was prepared. Golder has not considered the effect of any possible future developments including physical changes to any relevant location or changes to any laws or regulations relevant to such location.

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