

A. Statement of Compliance - Licence Details

ALL Licence holders must check that the Licence details in Section A are correct.

If there are changes to any of these details, **you must advise Environment Protection Authority (EPA) and apply as soon as possible for a variation to your Licence or for a Licence transfer.**

Licence variation and transfer application forms are available on the EPA website at:
<http://www.epa.nsw.gov.au/licensing-and-regulation/licensing> or from regional offices of the EPA, or by contacting by telephone 02 9995 5700.

If you are applying to vary or transfer your Licence, you must still complete and submit this Annual Return.

A1. Licence holder

Licence number : 6263
Licence holder : GRIFFITH CITY COUNCIL
Trading name (if applicable) :
ABN : 81 274 100 792
ACN :
Reporting period : From: 16-9-2022 To: 15-9-2023

A2. Premises to which Licence Applies (if applicable)

Common name (if any) : YENDA WASTE MANAGEMENT CENTRE
Premises : McMANUS ROAD YENDA 2681 NSW

A3. Activities to which Licence Applies

Waste disposal (application to land)

A4. Other Activities (if applicable)

A5. Fee-Based Activity Classifications

Note that the fee based activity classification is used to calculate the administrative fee.

Fee-based activity	Activity scale	Unit of measure
Waste disposal by application to land	> 0.00	capacity

A6. Assessable Pollutants (if applicable)

Note that the identification of assessable pollutants is used to calculate the **load-based fee**.
The following assessable pollutants are identified for the fee-based activity classifications in the licence:

B. Monitoring and Complaints Summary

B1. Number of Pollution Complaints

Pollution Complaint Category	Complaints
Air	0
Water	0
Noise	0
Waste	0
Other	0
Total complaints recorded by the licensee during the reporting period	0

B2. Concentration Monitoring Summary

For each concentration monitoring point identified in your licence, details are displayed below. If concentration monitoring is not required by your licence, **no data** will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

Note that this does not exclude the need to conduct appropriate concentration monitoring of assessable pollutants as required by load-based licensing (if applicable).

Monitoring Point 1

Groundwater quality monitoring, Piezometer labelled as bore 1 on map titled "Location of bores - Yenda Landfill" dated 10 November 1999 and on EPA file 235471A1

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre					
Ammonia	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chlorinated volatile compounds	milligrams per litre					
Conductivity	microsiemens per centimetre					

Fluoride	milligrams per litre					
Iron	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	milligrams per litre					
Nitrate	milligrams per litre					
pH	pH					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Total organic carbon	milligrams per litre					
Total Phenolics	milligrams per litre					

Monitoring Point 2

Groundwater quality monitoring, Piezometer labelled as bore 2 on map titled "Location of bores - Yenda Landfill" dated 10 November 1999 and on EPA file 235471A1

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre					
Ammonia	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chlorinated volatile compounds	milligrams per litre					
Conductivity	microsiemens per centimetre					
Fluoride	milligrams per litre					
Iron	milligrams per litre					

Magnesium	milligrams per litre					
Manganese	milligrams per litre					
Nitrate	milligrams per litre					
pH	pH					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Total organic carbon	milligrams per litre					
Total Phenolics	milligrams per litre					

Monitoring Point 3

Groundwater quality monitoring, Piezometer labelled as bore 3 on map titled "Location of bores - Yenda Landfill" dated 10 November 1999 and on EPA file 235471A1

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre					
Ammonia	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chlorinated volatile compounds	milligrams per litre					
Conductivity	microsiemens per centimetre					
Fluoride	milligrams per litre					
Iron	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	milligrams per litre					

Nitrate	milligrams per litre					
pH	pH					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Total organic carbon	milligrams per litre					
Total Phenolics	milligrams per litre					

Monitoring Point 4

Groundwater quality monitoring, Piezometer labelled as bore 4 on map titled "Location of bores - Yenda Landfill" dated 10 November 1999 and on EPA file 235471A1

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre					
Ammonia	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chlorinated volatile compounds	milligrams per litre					
Conductivity	microsiemens per centimetre					
Fluoride	milligrams per litre					
Iron	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	milligrams per litre					
Nitrate	milligrams per litre					
pH	pH					

Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Total organic carbon	milligrams per litre					
Total Phenolics	milligrams per litre					

Name of the uploaded file containing point data ▼

Yenda Waste Mangement Centre - 2022-23 EPA Analysis.pdf

B3. Volume or Mass Monitoring Summary

For each volume or mass monitoring point identified in your licence, details are displayed below. If volume or mass monitoring is not required by your licence, **no data** will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

Note that this does not exclude the need to conduct appropriate volume or mass monitoring of assessable pollutants are required by load-based licensing (if applicable).

C. Statement of Compliance - Licence Conditions

C1. Compliance with Licence Conditions

Were all conditions of the licence complied with (including monitoring and reporting requirements)?	Yes
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D. Statement of Compliance - Load Based Fee Calculation

If you are not required to monitor assessable pollutants by your licence, **no data** will appear below.

If assessable pollutants have been identified on your licence, the following worksheets for each assessable pollutant will determine your load based fee for the licence fee period to which this Annual Return relates.

Loads of assessable pollutants must be calculated using any of the methods provided in EPA's Load Calculation Protocol for the relevant activity. A Load Calculation Protocol would have been already sent to you with your licence. If you require additional copies, you can download the Protocol from the EPA's website or you can contact us on telephone 02 9995 5700.

You are required to keep all records used to calculate licence fees for four years after the licence fee was paid or became payable, whichever is the later date.

E. Statement of Compliance - Requirement to Prepare PIRMP

Have you prepared a Pollution Incident Response Management Plan (PIRMP) as required under section 153A of the Protection of the Environment Operations (POEO) Act 1997?		Yes
Is the PIRMP available at the premises?		Yes
Is the PIRMP available in a prominent position on a publicly accessible website?		Yes
Address of the web page where the PIRMP can be accessed ▼		
https://www.griffith.nsw.gov.au/waste-services		
Has the PIRMP been tested?		Yes
The PIRMP was last tested on	1-5-2023	
Has the PIRMP been updated?		Yes
The PIRMP was last updated on	22-5-2023	
Number of times the PIRMP was activated in this reporting period?		0
The PIRMP was activated on		

F. Statement of Compliance - Requirement to Publish Pollution Monitoring Data

Are there any conditions attached to your licence that require pollution monitoring to be undertaken as required under section 66(6) of the Protection of the Environment Operations (POEO) Act 1997?	No
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G. Statement of Compliance - Environment Management System and Practices

Do you have an ISO 14001 certified Environmental Management System (EMS) OR any other system that EPA considers is equivalent to the accountability, procedures, documentation and record keeping requirements of an ISO 14001 certified EMS?	No
Have you conducted an assessment of your activities and operations to identify the aspects that have a potential to cause environmental impacts and implemented operational controls to address these aspects?	No
Have you established and implemented an operational maintenance program, including preventative maintenance?	No

Do you keep records of regular inspections and maintenance of plant and equipment?	No
Do you conduct regular (at least yearly) environmental audits at the premises that are conducted by a competent and independent person?	No
Have you undertaken an independent environmental audit covering documented environmental practices, procedures and systems in place during the annual return period?	No
Have you established and implemented an environmental improvement or management plan?	No
Do you train staff in environmental issues that may arise from your activities and operations at the premises and keep records of this?	No

H. Signature and Certification

This Annual Return may only be signed by person(s) with legal authority to sign it as set out in following categories: an Individual, a Company, a Public authority or a Local council.

It is an offence under section 66 of the Protection of the Environment Operations Act 1997 to supply any information in this form that is false or misleading in a material respect, or to certify a statement that is false or misleading in a material respect. There is a maximum penalty of \$250,000 for a corporation and \$120,000 for an individual.

I/We

- declare that the information in the Monitoring and Complaints Summary in Section B of this Annual Return application is correct and not false or misleading in a material respect, and
- certify that the information in the Statement and Compliance in sections A, C, D, E, F, G and H and any other pages attached to Section C is correct and not false or misleading in a material respect.

Signed by: General Manager

Name	Brett Stonestreet
Position	General Manager
Email Address	Brett.Stonestreet@griffith.nsw.gov.au
Phone Number	0269628123

Signature	
Name	
Position	
Date	/ /

Declaration

I declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and

I certify that the information in the Statement of Compliance in section A,C,D,E,F and G and any pages attached to Section C is correct and not false or misleading in a material respect.

Annual Report

Yenda Landfill & Waste Disposal Facility

Reporting Period: 16 September 2022 to 15 September 2023.

1. Assessment of Environmental Performance

See attached Statement of Compliance

2. Tabulated Results of Monitoring

See Annual Return

Laboratory test results attached.

3. Graphical Results

See attached

4. Analysis of Data

See attached

5. Analysis of Complaints

Council has a single access number for all complaints. All complaint/complainants are being logged in CRM system for appropriate action. All records are maintained.

6. Deficiencies in Environmental Performance

Nil

7. Recommendations

Nil

Annual Return

Griffith City Council

Statement of Compliance

3. Limit Conditions

L5.2 Total tonnage not exceeded.

There was a total of 189tn's of waste disposed of within this reporting period.

A total of 1,251tn's of waste was transported from Yenda Waste Management Centre (YWMC) to Tharbogang Waste Management Centre (TWMC) for disposal.

Product	Tonnage
Steel	137
Mixed Waste	195
Green Waste	109
Concrete & Bricks	805

A total of 117.32tn of disposed waste from Yenda Waste Management Centre was recycled.

The breakdown is the following.

Product	Tonnage
Steel	137
Mattress	5.32
Tyres	0

For the keen of eye, that picked up the discrepancy of 1062tn's between what was recorded as disposed of at YWMC and what was transported back to TWMC, the reason behind this is that the data recorded at the time of disposal is based on the EPA assumed weights. Waste transported back to TWMC goes over a weighbridge which provides an accurate account of the weight.

L6 Noise Limits

Due to casual machinery operation (5 to 6 times a year), the noise on the premises was not measured. The plant used complies with requirements.

L7 Hours of Operation

Landfill operates on Sunday between 1pm and 5pm (4 hours). Capping the cell takes place on a need's basis.

4. Operating Conditions

O2 Maintenance of plant and equipment

Council's plant and equipment maintained by Council workshop staff to address any breakdowns and maintenance issues.

O10 Covering of waste

Some compaction is carried out periodically by excavator and loader when covering material is imported to cover landfill.

O11 Control of Pests, vermin and weeds

A Contractor is employed to eradicate feral animals and pests periodically.

5. Monitoring and Recording Conditions

M2.1 All Boreholes were sampled.

6. Reporting Conditions

R2 Notification of environmental harm

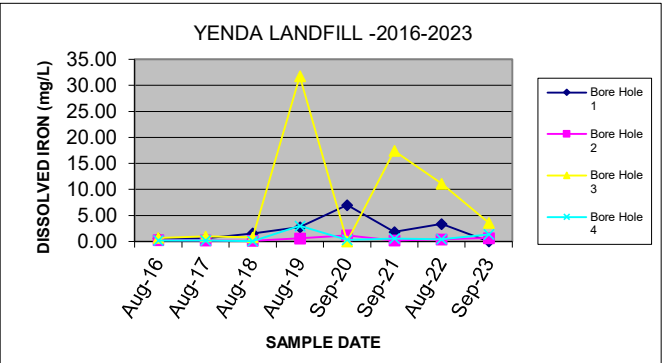
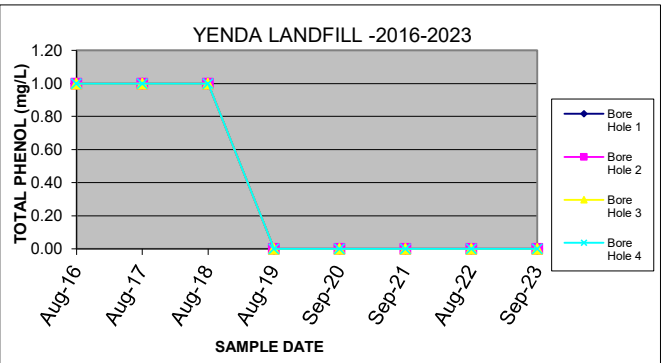
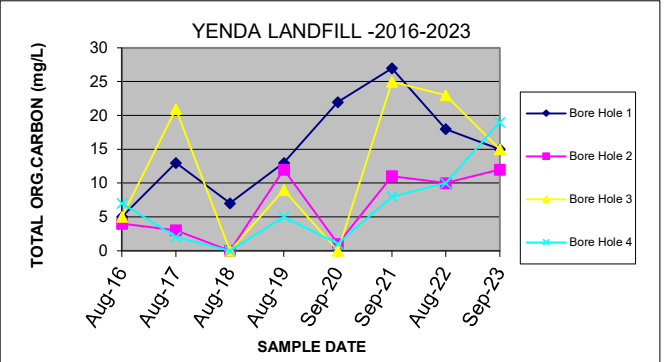
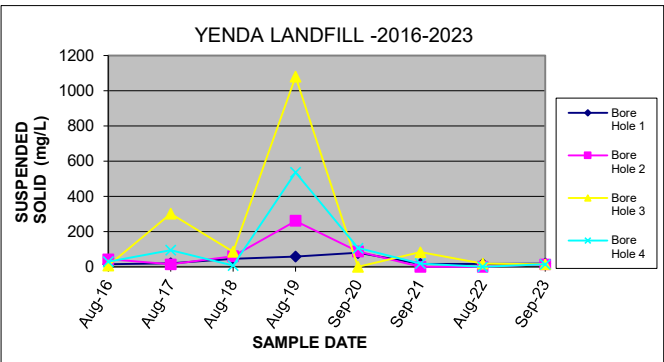
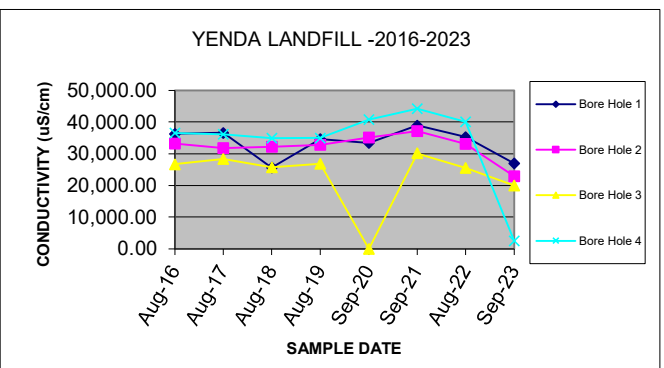
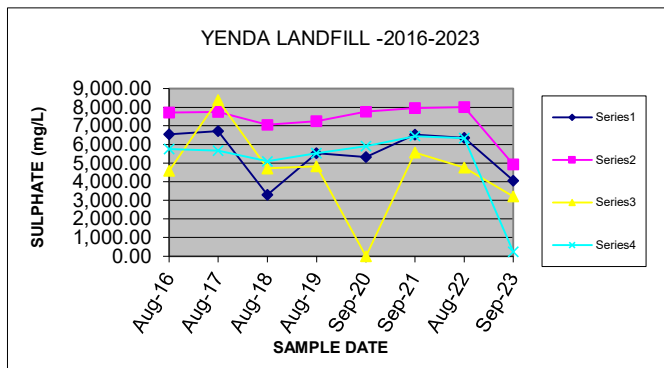
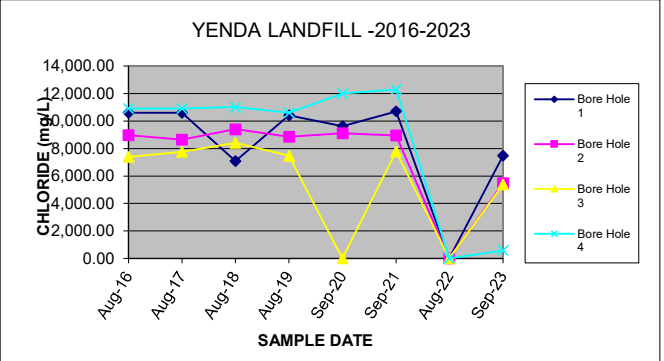
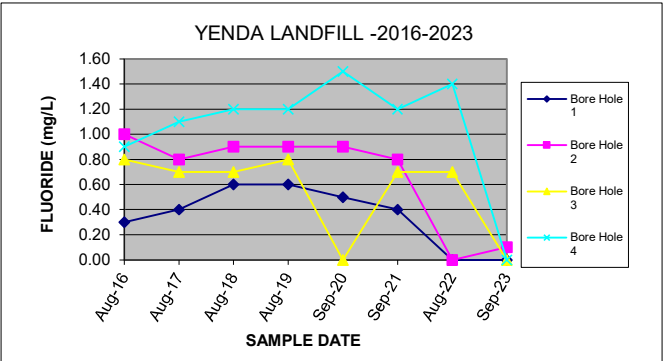
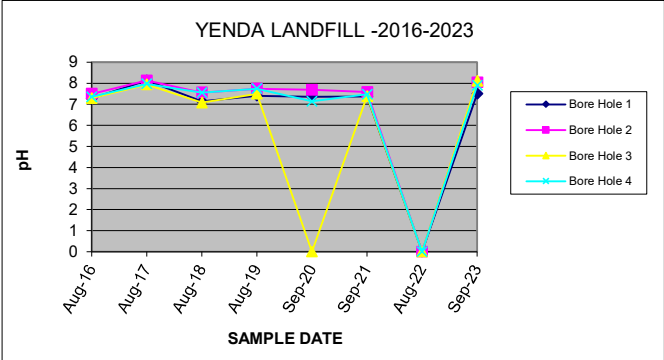
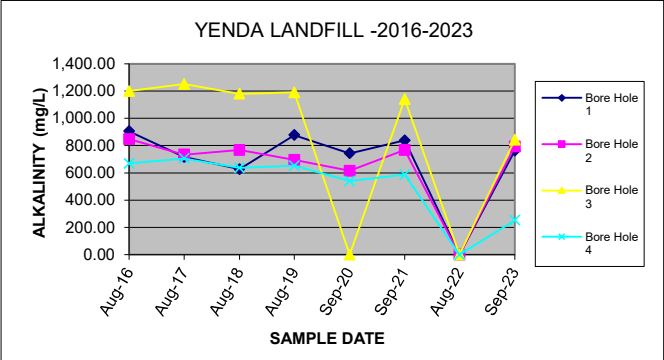
Nil

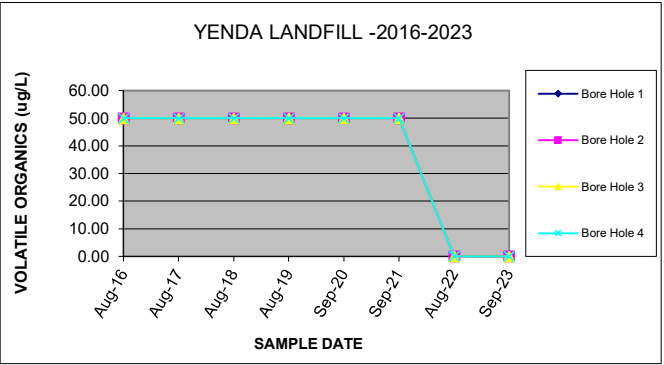
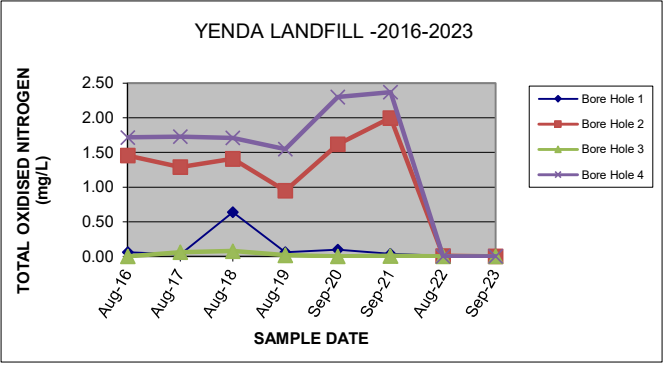
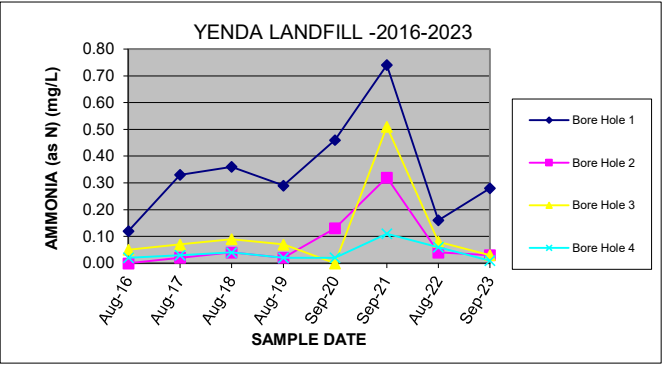
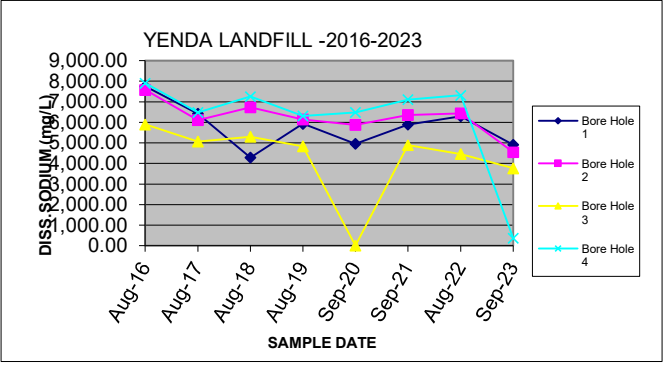
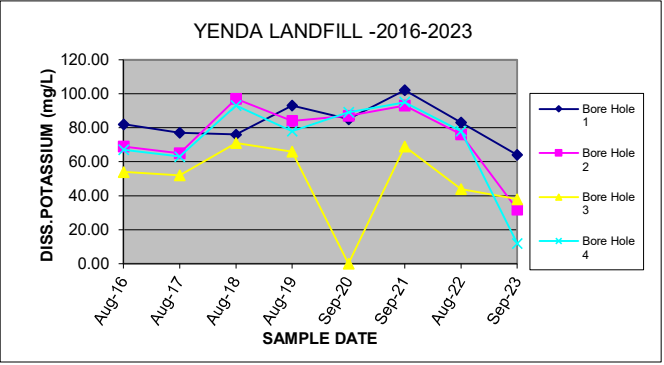
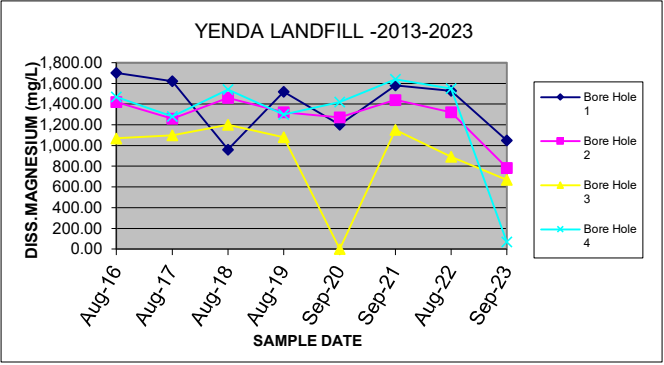
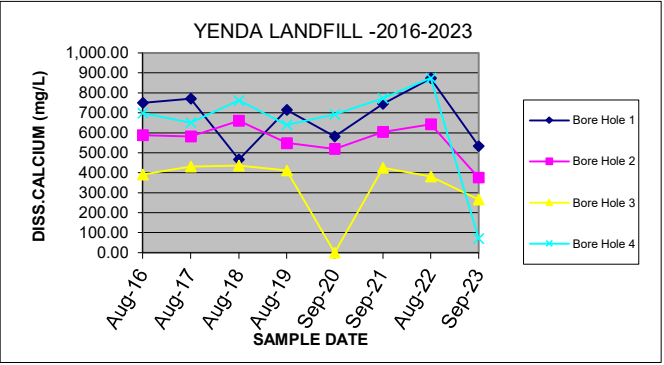
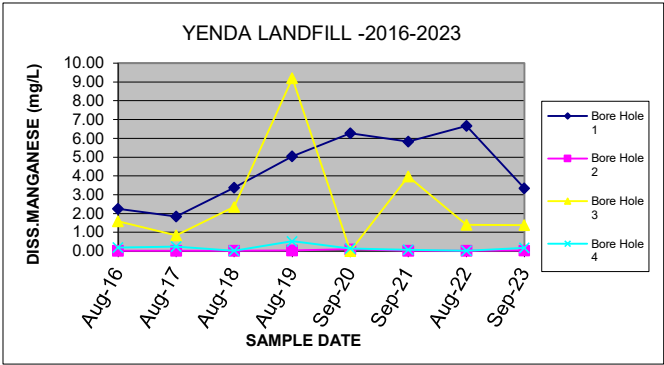
R4 Recording of Fires

There were no fires at this facility within this reporting period.

R6 Annual Report

- ✓ Environmental performance
- ✓ Tabulated results
- ✓ Graphical representation
- ✓ Analysis and interpretation of data
- ✓ Analysis of response and complaints received
- ✓ Identify and deficiencies, trends or incidents
- ✓ Recommendations on improvements





Yenda Borehole Test Results 2022/23

Depth (m)	Test Results	2022/2023				Publication Date
		COUNT of samples for period	MIN of samples for period	MAX of samples for period	AVERAGE	
	Sep-23					
Bore Hole 1	4.84	1	-	-	-	26/09/2023
Bore Hole 2	2.86	1	-	-	-	26/09/2023
Bore Hole 3	4.55	1	-	-	-	26/09/2023
Bore Hole 4	4.60	1	-	-	-	26/09/2023
pH	Test Results					
	Sep-23					
Bore Hole 1	7.50	1	-	-	-	26/09/2023
Bore Hole 2	8.05	1	-	-	-	26/09/2023
Bore Hole 3	8.11	1	-	-	-	26/09/2023
Bore Hole 4	7.89	1	-	-	-	26/09/2023
Alkalinity (mg/L)	Test Results					
	Sep-23					
Bore Hole 1	762.00	1	-	-	-	26/09/2023
Bore Hole 2	793.00	1	-	-	-	26/09/2023
Bore Hole 3	843.00	1	-	-	-	26/09/2023
Bore Hole 4	253.00	1	-	-	-	26/09/2023
Fluoride (mg/L)	Test Results					
	Sep-23					
Bore Hole 1	<0.1	1	-	-	-	26/09/2023
Bore Hole 2	0.10	1	-	-	-	26/09/2023
Bore Hole 3	<0.1	1	-	-	-	26/09/2023
Bore Hole 4	<0.1	1	-	-	-	26/09/2023
Chloride (mg/L)	Test Results					
	Sep-23					
Bore Hole 1	7,490.00	1	-	-	-	26/09/2023
Bore Hole 2	5,490.00	1	-	-	-	26/09/2023
Bore Hole 3	5,380.00	1	-	-	-	26/09/2023
Bore Hole 4	574.00	1	-	-	-	26/09/2023
Sulphate (mg/L) SO4	Test Results					
	Sep-23					
Bore Hole 1	4,060.00	1	-	-	-	26/09/2023
Bore Hole 2	4,930.00	1	-	-	-	26/09/2023
Bore Hole 3	3,210.00	1	-	-	-	26/09/2023
Bore Hole 4	230.00	1	-	-	-	26/09/2023
Sp.Conductance (uS/cm)	Test Results					
	Sep-23					
Bore Hole 1	26,900.00	1	-	-	-	26/09/2023
Bore Hole 2	22,900.00	1	-	-	-	26/09/2023
Bore Hole 3	20,000.00	1	-	-	-	26/09/2023
Bore Hole 4	2,510.00	1	-	-	-	26/09/2023
Suspended.Solid (mg/L)	Test Results					
	Sep-23					
Bore Hole 1	19.00	1	-	-	-	26/09/2023
Bore Hole 2	14.00	1	-	-	-	26/09/2023
Bore Hole 3	15.00	1	-	-	-	26/09/2023
Bore Hole 4	15.00	1	-	-	-	26/09/2023
Total Org Carbon-filt (mg/L)	Test Results					
	Sep-23					
Bore Hole 1	15.00	1	-	-	-	26/09/2023
Bore Hole 2	12.00	1	-	-	-	26/09/2023
Bore Hole 3	15.00	1	-	-	-	26/09/2023
Bore Hole 4	19.00	1	-	-	-	26/09/2023

<u>Total Phenol (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	<1.0	1	-	-	-	26/09/2023
Bore Hole 2	<1.0	1	-	-	-	26/09/2023
Bore Hole 3	<1.0	1	-	-	-	26/09/2023
Bore Hole 4	<1.0	1	-	-	-	26/09/2023
<u>Dissolved Iron (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	<0.1	1	-	-	-	26/09/2023
Bore Hole 2	0.65	1	-	-	-	26/09/2023
Bore Hole 3	3.59	1	-	-	-	26/09/2023
Bore Hole 4	1.33	1	-	-	-	26/09/2023
<u>Dissolved Manganese (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	3.34	1	-	-	-	26/09/2023
Bore Hole 2	0.02	1	-	-	-	26/09/2023
Bore Hole 3	1.38	1	-	-	-	26/09/2023
Bore Hole 4	0.17	1	-	-	-	26/09/2023
<u>Dissolved Calcium (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	533.00	1	-	-	-	26/09/2023
Bore Hole 2	375.00	1	-	-	-	26/09/2023
Bore Hole 3	266.00	1	-	-	-	26/09/2023
Bore Hole 4	69.00	1	-	-	-	26/09/2023
<u>Dissolved Magnesium (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	1,050.00	1	-	-	-	26/09/2023
Bore Hole 2	785.00	1	-	-	-	26/09/2023
Bore Hole 3	669.00	1	-	-	-	26/09/2023
Bore Hole 4	70.00	1	-	-	-	26/09/2023
<u>Dissolved Potassium (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	64.00	1	-	-	-	26/09/2023
Bore Hole 2	32.00	1	-	-	-	26/09/2023
Bore Hole 3	38.00	1	-	-	-	26/09/2023
Bore Hole 4	12.00	1	-	-	-	26/09/2023
<u>Dissolved Sodium (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	4,910.00	1	-	-	-	26/09/2023
Bore Hole 2	4,550.00	1	-	-	-	26/09/2023
Bore Hole 3	3,770.00	1	-	-	-	26/09/2023
Bore Hole 4	367.00	1	-	-	-	26/09/2023
<u>Ammonia (as N) (mg/L) N</u>	Test Results					
	Sep-23					
Bore Hole 1	0.28	1	-	-	-	26/09/2023
Bore Hole 2	0.03	1	-	-	-	26/09/2023
Bore Hole 3	0.03	1	-	-	-	26/09/2023
Bore Hole 4	0.01	1	-	-	-	26/09/2023
<u>Total Oxidised Nitrogen (as N) (mg/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	<1.0	1	-	-	-	26/09/2023
Bore Hole 2	<1.0	1	-	-	-	26/09/2023
Bore Hole 3	<1.0	1	-	-	-	26/09/2023
Bore Hole 4	<1.0	1	-	-	-	26/09/2023
<u>Volatile Organics (ug/L)</u>	Test Results					
	Sep-23					
Bore Hole 1	<50	1	-	-	-	26/09/2023
Bore Hole 2	<50	1	-	-	-	26/09/2023
Bore Hole 3	<50	1	-	-	-	26/09/2023
Bore Hole 4	<50	1	-	-	-	26/09/2023

Publication Date	Sample month	Reporting Period
26/09/2023	1/09/2023	2022/2023



CERTIFICATE OF ANALYSIS

Work Order	: ES2330620	Page	: 1 of 7
Client	: GRIFFITH CITY COUNCIL	Laboratory	: Environmental Division Sydney
Contact	: JOHN ROSER	Contact	: Customer Services ES
Address	: 40-46 JENSEN ROAD GRIFFITH NSW 2680	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 6962 8100	Telephone	: +61-2-8784 8555
Project	: ----	Date Samples Received	: 07-Sep-2023 16:59
Order number	: ----	Date Analysis Commenced	: 09-Sep-2023
C-O-C number	: ----	Issue Date	: 14-Sep-2023 17:06
Sampler	: ----		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 4		
No. of samples analysed	: 4		



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
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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.

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenzo(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- 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.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol 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: LORs have been raised for some samples due to matrix interference (High sample salinity)
- 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.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Yenda Point 1	Yenda Point 2	Yenda Point 3	Yenda Point 4	----
Sampling date / time				07-Sep-2023 09:00	07-Sep-2023 09:30	07-Sep-2023 10:00	07-Sep-2023 10:30	-----	
Compound	CAS Number	LOR	Unit	ES2330620-001	ES2330620-002	ES2330620-003	ES2330620-004	-----	
				Result	Result	Result	Result	----	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.50	8.05	8.11	7.89	----	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	26900	22900	20000	2510	----	
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L	19	14	15	15	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	762	793	843	253	----	
Total Alkalinity as CaCO3	----	1	mg/L	762	793	843	253	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	4060	4930	3210	230	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	7490	5490	5380	574	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	533	375	266	69	----	
Magnesium	7439-95-4	1	mg/L	1050	785	669	70	----	
Sodium	7440-23-5	1	mg/L	4910	4550	3770	367	----	
Potassium	7440-09-7	1	mg/L	64	32	38	12	----	
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	3.34	0.021	1.38	0.170	----	
Boron	7440-42-8	0.05	mg/L	3.94	5.78	4.59	1.01	----	
Iron	7439-89-6	0.05	mg/L	<0.10	0.65	3.59	1.33	----	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	<0.1	0.1	<0.1	<0.1	----	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.28	0.03	0.03	0.01	----	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.13	4.33	0.12	1.93	----	
Nitrate as NO3	14797-55-8	0.05	mg/L	0.58	19.2	0.53	8.55	----	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				Yenda Point 1	Yenda Point 2	Yenda Point 3	Yenda Point 4	----
Sampling date / time				07-Sep-2023 09:00	07-Sep-2023 09:30	07-Sep-2023 10:00	07-Sep-2023 10:30	----
Compound	CAS Number	LOR	Unit	ES2330620-001	ES2330620-002	ES2330620-003	ES2330620-004	-----
				Result	Result	Result	Result	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued								
Nitrite + Nitrate as N	----	0.01	mg/L	0.13	4.33	0.12	1.93	----
EN055: Ionic Balance								
Ø Total Anions	----	0.01	meq/L	311	273	235	26.0	----
Ø Total Cations	----	0.01	meq/L	328	282	233	25.5	----
Ø Ionic Balance	----	0.01	%	2.69	1.57	0.46	1.09	----
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	15	12	15	19	----
EP074D: Fumigants								
2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	<5	----
1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	<5	----
cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	<5	----
trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	<5	----
1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	<5	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	<50	----
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	<50	----
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	<50	----
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	<50	----
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	<50	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	<50	----
1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	<5	----
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	<5	----
trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	<5	----
1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	<5	----
cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	<5	----
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	<5	----
1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	<5	----
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	<5	----
1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	<5	----
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	<5	----
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	<5	----
1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	<5	----
1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	<5	----
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	<5	<5	----



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Sampling date / time				07-Sep-2023 09:00	07-Sep-2023 09:30	07-Sep-2023 10:00	07-Sep-2023 10:30	----
Compound	CAS Number	LOR	Unit	ES2330620-001	ES2330620-002	ES2330620-003	ES2330620-004	-----
				Result	Result	Result	Result	----
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	<5	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	<5	<5	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	<5	<5	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	<5	<5	----
1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	<5	<5	----
Pentachloroethane	76-01-7	5	µg/L	<5	<5	<5	<5	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	<5	<5	----
Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	<5	<5	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	5	µg/L	<5	<5	<5	<5	----
Bromobenzene	108-86-1	5	µg/L	<5	<5	<5	<5	----
2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	<5	<5	----
4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	<5	<5	----
1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	<5	<5	----
1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	<5	<5	----
1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	<5	<5	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	<5	<5	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	<5	<5	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	5	µg/L	<5	<5	<5	<5	----
Bromodichloromethane	75-27-4	5	µg/L	<5	<5	<5	<5	----
Dibromochloromethane	124-48-1	5	µg/L	<5	<5	<5	<5	----
Bromoform	75-25-2	5	µg/L	<5	<5	<5	<5	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
2-Chlorophenol	95-57-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
2-Methylphenol	95-48-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	----
2-Nitrophenol	88-75-5	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
2.4-Dimethylphenol	105-67-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
2.4-Dichlorophenol	120-83-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
2.6-Dichlorophenol	87-65-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				Yenda Point 1	Yenda Point 2	Yenda Point 3	Yenda Point 4	----
Sampling date / time				07-Sep-2023 09:00	07-Sep-2023 09:30	07-Sep-2023 10:00	07-Sep-2023 10:30	----
Compound	CAS Number	LOR	Unit	ES2330620-001	ES2330620-002	ES2330620-003	ES2330620-004	-----
				Result	Result	Result	Result	----
EP075(SIM)A: Phenolic Compounds - Continued								
2,4,5-Trichlorophenol	95-95-4	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Pentachlorophenol	87-86-5	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	----
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	5	%	99.9	94.1	95.8	91.1	----
Toluene-D8	2037-26-5	5	%	120	112	113	112	----
4-Bromofluorobenzene	460-00-4	5	%	116	108	110	108	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	30.3	31.2	18.4	30.3	----
2-Chlorophenol-D4	93951-73-6	1.0	%	61.9	55.5	43.0	64.2	----
2,4,6-Tribromophenol	118-79-6	1.0	%	71.3	49.1	52.5	66.3	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	70.4	57.3	69.0	69.7	----
Anthracene-d10	1719-06-8	1.0	%	92.7	72.1	78.0	77.6	----
4-Terphenyl-d14	1718-51-0	1.0	%	91.3	76.2	85.2	80.3	----



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
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112