



Walgett Shire Council Walgett Sewage Treatment System

**DECCW
Licence 13056
Outflow**

**Test Results
February 2024
Bate Street
Walgett NSW 2832**



**82 Plain Street
TAMWORTH NSW 2340
Phone: 02 6762 1733
Fax: 02 6765 9109
Email: admin@eastwestonline.com.au
Website: www.eastwestonline.com.au
ABN 52 655 947 827**

This document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. This document should not be used or copied without the written authorisation of East West Enviroag Pty Limited or Walgett Shire Council.

This report does not provide a complete assessment of the environmental integrity of the site and is limited to the scope defined herein. Should any reader require that other matters be considered apart from those considered within this report, they should then make their own investigations and form their own conclusions.

This report has been prepared by:

Stephanie Cameron

Independent consultant for agriculture & the environment
(B.App.Sc)

Ref.: EW240462

Enc.: Envirolab COA 343491



Table 2: Summary of testing results for Licence 13056; Point 1:

Analyte	Units	Point 1							100 Percentile Limit	Guidelines
		EW231890 -1	EW240462 -1							
		26/10/23	08/02/2024							
Oil & Grease	mg/L	<5	19						<10	<1000
pH	pH Units	9.0	10.0						6.5-8.5	6.0-8.5
Total Nitrogen	mg/L N	0.05	49						<20	<5-125
Total Phosphorus	mg/L P	5.7	11						<10	<0.05-12
BOD	mg/L	38	300						<20	N/A
Total Suspended Solids	mg/L	38	190						<50	N/A
Faecal Coliforms	cfu/100mL	170	<18						N/A	<1000
Total Coliforms	cfu/100mL	260	130						N/A	N/A

100 Percentile Concentration Limit: NSW Environment, Climate Change & Water (2011) *Walgett Shire Council Environmental Protection Licence 13056 – Walgett Sewage Treatment*.

Guidelines: ANZECC (2000) *Australian & New Zealand Guidelines for Fresh & Marine Waters for Primary Industries*. DECCW (2004) *Environmental Guidelines: Use of Effluent by Irrigation*.

NS ~ Sample could not be collected

NT ~ Testing not required

Na ~ Not applicable

7th March 2024

Director of Engineering/Technical Services
Walgett Shire Council
PO Box 31
Walgett NSW 2832
Email: admin@walgett.nsw.gov.au

To whom it may concern,

The following comments are offered after studying the results for contained effluent sampled at Point 1 on the 8th February 2024:

1. **Oil & Grease (O&G)** is a measure of a variety of substances including fuels, motor oil, lubricating oil, hydraulic oil, cooking oil, and animal-derived fats. Point 1 O&G is above the 100 percentile concentration limit specified in EPL 13056.
2. **pH** is a measure of the concentration of hydrogen ion, which determines how acidic or basic the water is. The pH at 10.0 is very alkaline and not within the 100-percentile concentration range of 6.0-8.5 pH units.
3. **Total nitrogen** and **total phosphorus** are nutrients essential for plant growth and minor increases in these nutrient levels can alter natural ecosystems. Increasingly, waterways and groundwater systems are showing the effects of these nutrients. Therefore the discharge of effluent should be managed to avoid excessive nutrient levels where possible. Point 1 has unacceptable levels of total phosphorus and nitrogen, according to the limit specified in EPL 13056.
4. **BOD** (Biological Oxygen Demand) is a measure of the oxygen used by microorganisms to decompose waste. Sewage treatment systems contain huge quantities of organic waste where bacteria present are working to decompose waste. The demand for oxygen will be high (due to all the bacteria) where the BOD level is high. As the waste is consumed by the bacteria, BOD levels will be low. BOD level at Point 1 is 300mg/L which exceeds the limit specified in EPL 13056.



5. **Total Suspended Solids (TSS)** consists of an inorganic fraction (silts, clays, etc.) and an organic fraction (algae, zooplankton, bacteria, and detritus). TSS is carried along suspended in the effluent. TSS can result in cloudiness of the sample and high sediment loads are very obvious because of the sample's muddy or turbid appearance. The TSS at Point 1 is 190mg/L which exceeds the limit specified in EPL 13056.

6. **Faecal Coliforms** of main concern for drinking water quality is the number of faecal coliforms present. This indicates there is no contamination present. Faecal coliforms can come from other mammals and humans. The most common faecal coliform is *E coli*. For irrigation of sports fields the World Health Organisation (WHO) in 2001 recommended a maximum of 1000cfu/100mL. Point 1 has <18cfu/100mL faecal coliforms, which is beneath the irrigation threshold.

Overall Impressions:

The sample of effluent collected from the new monitoring Point 1, located at the Walgett Sewage Treatment System during February 2024 is above the 100 percentile concentration limits specified in EPL 13056 for all parameters except coliforms.

Please let us know if you would like further comment.

Yours faithfully,

Stephanie Cameron

Independent consultant for agriculture & the environment
(B.App.Sc)

