



Test results for uranium in water in REMS communities: 2012-14; 2018-20; 2020-21, 2021- 22 and 2022-23

The Remote Essential and Municipal Services (REMS) program currently maintains and upgrades water infrastructure in 137 remote Aboriginal communities.

Groundwater is the water source for these communities (with the exception of Kalumburu which is intaking from a river source). Groundwater can often contain chemical elements and compounds. One element sometimes found is uranium, typically as a result of leaching from rock, soil and natural deposits. Elevated levels of uranium in drinking water may present a health risk, although most human consumption of uranium occurs through food.¹

Of the 89 communities (does not include self-managed), there are only four communities where uranium levels exceeded the level set in the Australian Drinking Water Guidelines (ADWG version 3.7), being 0.02 mg/L, during the reporting periods (1 July 2022 to 30 June 2023).

For the other 85 communities and the 44 very small communities, uranium was not detected above the ADWG level of 0.02 mg/L during the reporting period.

Water sampling and laboratory analysis is carried out to industry standards for drinking water. Test results are assessed against the Australian Drinking Water Guidelines (ADWG) and advice from the Department of Health (WA). All test results are provided monthly to the Department of Health.

ADWG version 3.7 was implemented in WA on 1 January 2023 and the health-based guideline value for uranium was rounded up from 0.017 mg/L to 0.02 mg/L in ADWG version 3.7. In this report the health-based guideline value of 0.017 mg/L was used to

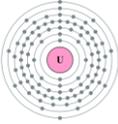
¹ Australian Drinking Water Guidelines, 2011 (version 3.7 updated January 2022), Fact Sheet Uranium, p. 1018.

assessed uranium results prior to 1st July 2022 and the new guideline value of 0.02 mg/L was used to assessed results after 1st July 2022.

KEY

GOLD: Goldfields
KIMB: Kimberley
PILB: Pilbara
MIDW: Mid-West

NA: not available (no testing regime during period)

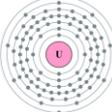
| | | | | | | | Chemical testing (number of test results above ADWG levels) |
|--------|-------------------------|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|
| | |  Uranium ² | | | | | |
| Region | Community | 1 July 2012 to 30 June 2014 | 1 July 2018 to 30 June 2020 | 1 July 2020 to 30 June 2021 | 1 July 2021 to 30 June 2022 | 1 July 2022 to 30 June 2023 | Comment |
| GOLD | Tjuntjuntjarra | 4 | | | | | Continuing monthly monitoring. Uranium levels in class 1 (potable supply) and class 2 (non potable supply) were all below ADWG health limit in the current reporting period. |
| | | | | | | | |
| PILB | Kiwirrkurra | | 1 | | 2 | | Bottled water provided for all persons due to elevated fluoride level. Water treatment plant to reduce fluoride, uranium and nitrate levels is under construction. |
| PILB | Parnngurr | 10 | 3 | 4 | 8 | 4 | Bottled water provided for all persons from October 2021 on advice from Department of Health, due to uranium level, but the community has received the All Clear notice from 10 November 2022 as water treatment plant has been commissioned and proofing period has concluded. Uranium levels were below ADWG limit since the reverse osmosis unit has been in operation in November 2022. |
| PILB | Yandeyarra | 3 | | | | 1 | Ion exchange unit is installed for uranium removal. Continuing monthly monitoring. The elevated uranium detected on 3 February 2023 was because the ion exchange unit was offline between 1-3 February 2023, and the community received untreated chlorinated water for ~48 hours. |
| | | | | | | | |
| KIMB | Bow River | | | | 3 | | Bottled water provided for children age of 8 years or under due to elevated fluoride levels. Testing is clear of uranium after June 2022. |
| KIMB | Burks Park (Burralluba) | | | | 5 | | Community included in REMS from Dec 2020. Water consumption not currently monitored. Historically elevated uranium levels, but no bottled water has been requested by DoH. |

² Under the ADWG version 3.7, the concentration of uranium in drinking water should not exceed 0.02mg/L. In this report the health-based guideline value of 0.017 mg/L was used to assessed uranium results prior to 1st July 2022 and the new guideline value of 0.02 mg/L was used to assessed results after 1st July 2022.

KEY

GOLD: Goldfields
 KIMB: Kimberley
 PILB: Pilbara
 MIDW: Mid-West

NA: not available (no testing regime during period)

| | | | | | | | Chemical testing (number of test results above ADWG levels) |
|--------|--------------|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|
| | |  Uranium ² | | | | | |
| Region | Community | 1 July 2012 to 30 June 2014 | 1 July 2018 to 30 June 2020 | 1 July 2020 to 30 June 2021 | 1 July 2021 to 30 June 2022 | 1 July 2022 to 30 June 2023 | Comment |
| | | | | | | | Uranium levels were all below ADWG health limit in the current reporting period. |
| | | | | | | | |
| MIDW | Burringurrah | 9 | 5 | 9 | 11 | 8 | Bottled water provided for all persons from February 2022, on advice from Department of Health, due to elevated uranium level. One sample missed in the 2021-22 annual period. Design and commissioning of new water treatment plant to reduce uranium level commenced. |
| MIDW | Pia Wadjari | | 8 | 11 | 12 | 7 | Bottled water provided for all persons from May 2021, on advice from Department of Health, due to elevated uranium level. Design and commissioning of new water treatment plant to reduce uranium level commenced. |