Alcoa Groundwater Pumping Test

COMMUNITY UPDATE JULY 2021

This monthly update provides a status of groundwater levels and water quality for key monitoring bores, including total extraction rates, as part of the Alcoa 12-month groundwater pumping test of the Upper Eastern View Formation (UEVF) aquifer.

In summary:

- This report covers the period of 24 June 2021 to 22 July 2021.
- The test is progressing well and all activities were conducted in accordance with the licence conditions.
- The daily pumping rate remained at 4.32ML per day.
- 132.6ML was extracted and placed into the mine void waterbody during July, with a total of 304.5ML extracted since the pumping test commenced on 13 May 2021.
- The water level increased to RL -19.41m (an increase of 1.21m since 13 May 2021) which represents 12.5% of the proposed full volume of the waterbody. (Relative level, or RL, is the water level in metres below sea level.)
- There is no significant change to groundwater levels in the upper part of the UEVF aquifer which is gradually increasing, or the unconfined shallow Demons Bluff Group (DBG) and Perched Water Table (PWT) aquifers which are responding to natural climate variations.
- As expected, groundwater levels have declined within modelled expectations at the pumping bore in the lower part of the UEVF aquifer.
- No trigger levels were reached during the reporting period.
- Further information about the 12-month groundwater pumping test can be found in this fact sheet.

Water Monitoring Plan

The 12-month groundwater pumping test commenced on 13 May 2021 and is underpinned by a comprehensive water monitoring plan approved by Southern Rural Water. The plan will ensure the groundwater extraction is not threatening groundwater dependent ecosystems that may connect to the aquifer underlying and surrounding the mine, or adversely impact any other users.

Water extraction rates, groundwater levels and quality, and the waterbody level are closely monitored by a specialist consultant. Results are reported monthly to the co-regulator technical working group (inclusive of Alcoa, Southern Rural Water, Department Environment Land Water and Planning, EPA Victoria, Earth Resources Regulation, Barwon Water and CCMA) for review, and an update is published for the community.

A total of 1,500ML is permitted to be extracted during the pumping test, with a maximum daily extraction limit of 5.18ML.

To monitor groundwater levels and quality during the pumping test, 28 bores have been selected with 12 of those also nominated as trigger bores. The location of the trigger and other monitoring bores are shown in Figure 1 below.

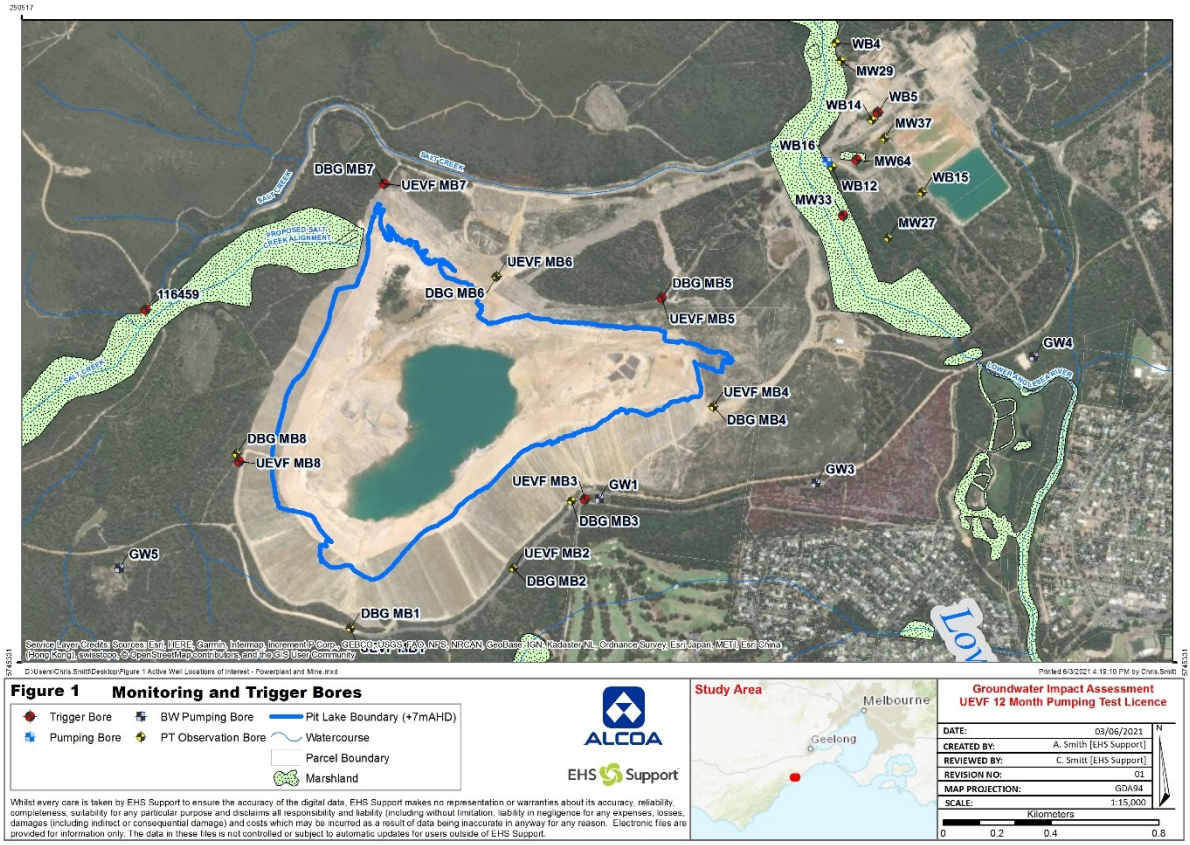

Figure 1: *Trigger and other monitoring bore locations.*

Each of the trigger bores has defined water level and/or water quality thresholds, known as triggers, and defined response actions in the event that a trigger is met. The triggers and responses, known as trigger rules, were developed in consultation with a specialist consultant and Southern Rural Water.

Each trigger has been set at a conservatively low level to ensure we are alerted early, and, if necessary, able to act quickly during the pumping test to prevent damage to groundwater dependent ecosystems. In total there are five separate trigger rules, with these applying in various combinations to the 12 trigger bores. Each trigger rule has different responses ranging from additional monitoring to reducing the pumping rate.

Data from key Barwon Water monitoring bores in the vicinity is also included in the water monitoring plan for analysis. This data is provided by Barwon Water.

Extraction rates

Month	Volume extracted (ML)	Maximum daily volume extracted (ML)	Total volume extracted to date (ML)
May 2021 (from 13/5)	53.6 ML	3.45ML	53.6 ML
June 2021	118.3ML	4.32ML	171.9ML
July 2021	132.6ML	4.32ML	304.5ML

Note: SRW License allows a maximum daily limit of 5.18ML, and total extracted volume limit of 1500ML.

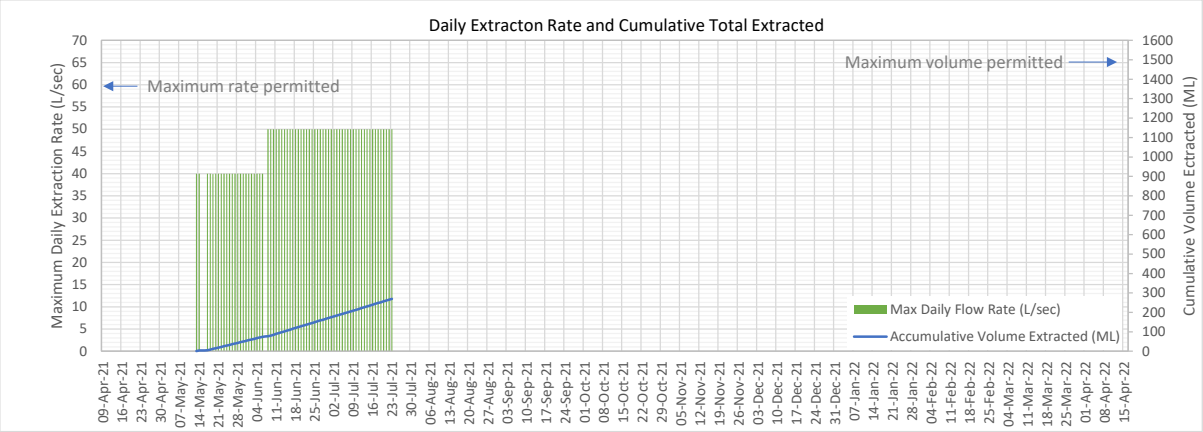

Figure 2: Daily extraction rate and cumulative total extracted

Waterbody level

Date	Waterbody level RL (m)	Monthly Rainfall (mm)	Waterbody % Full
26 April 2021	-20.93m	N/A	10.3%
24 May 2021	-20.42m	163.2mm	11.1%
21 June 2021	-19.93m	65.8mm	11.8%
19 July 2021	-19.41m	84.6mm	12.5%

Note: Total estimated volume of the water body is 17,200ML (17.2GL) at RL 5.5m (subject to future bathymetry surveys).

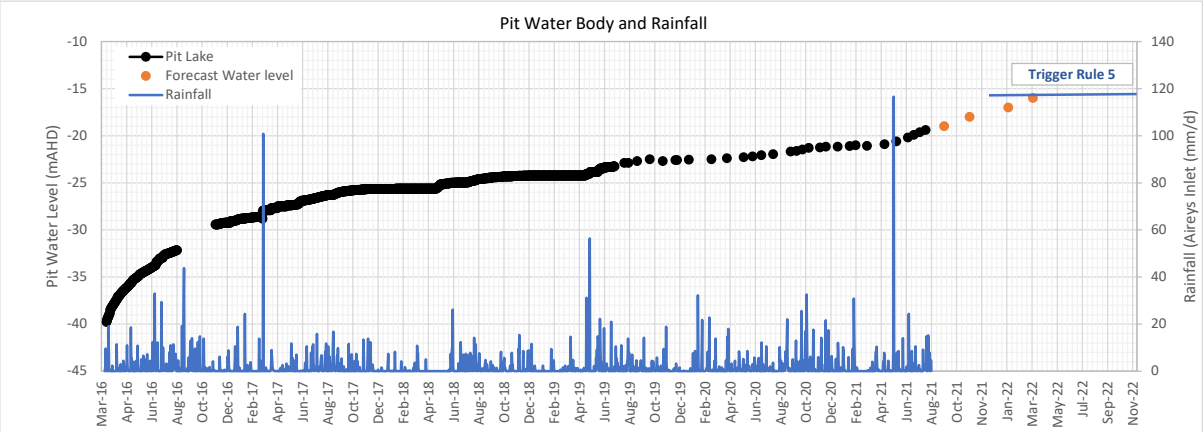

Figure 3: Pit waterbody level and rainfall (forecast water level based on average rainfall and 4.32ML/day inflow)

Groundwater level monitoring and trigger status

Table 1: *Groundwater level monitoring and trigger status.*

Bore	Overall status	Action / Comment
UEVF WB14	No trigger reached	Note WB14 replaced WB5 as a more suitable trigger bore as approved by co-regulator technical working group.
UEVF SOBN 116459	No trigger reached	Continue to monitor
UEVF MB3	No trigger reached	Continue to monitor
UEVF MB5	No trigger reached	Continue to monitor
UEVF MB7	No trigger reached	Continue to monitor
UEVF MB8	No trigger reached	Continue to monitor
DBG MB3	No trigger reached	Continue to monitor
DBG MB5	No trigger reached	Continue to monitor
DBG MB7	No trigger reached	Continue to monitor
DBG MB8	No trigger reached	Continue to monitor
PWT MW33	No trigger reached	Continue to monitor
PWT MW64	No trigger reached	Continue to monitor

Barwon Water Anglesea borefield monitoring data

The Anglesea borefield is one of a number of water sources that can supplement the existing Greater Geelong water supply system for Barwon Water. Access to groundwater from the Lower Eastern View Formation (LEVF) is governed by a bulk entitlement, issued by the Victorian Government.

During operation, Barwon Water reports monthly on the status against the threshold level for two key bores. They have recommenced these monthly updates for the duration of the Alcoa pumping test. The Anglesea borefield groundwater level trigger components (P8 or P19) were not reached during this reporting period.

For more information on the Anglesea borefield and the monthly updates please see the Barwon Water website.