Alcoa Groundwater Pumping Test

COMMUNITY UPDATE MAY 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:

- The pumping test commenced on 13 May 2021, from the test pumping bore WB16 (refer Figure 1 below).
- The test is performing as expected and all activities were conducted in accordance with the licence conditions.
- 53.6ML was extracted and placed into the mine void waterbody, with the water level increasing from RL-20.93m to -20.42m (survey 24 May 2021).
- There is no significant change to groundwater levels in the upper part of the UEVF aquifer or the unconfined shallow Demons Bluff Group (DBG) and Perched Water Table (PWT) aquifers which are responding to natural climatic variations.
- As expected, groundwater levels have declined within modelled expectations at the pumping bore and in the lower part of the UEVF aquifer.
- Triggers for the 12 nominated bores were not exceeded during the month.
- Based on the performance to date, the daily pumping rate is expected to be increased from 3.45ML per day to 4.32ML per day during June.
- Further information about the 12-month groundwater pumping test can be found in this fact sheet.

Water Monitoring Plan

The groundwater pumping test 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 third party 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-regular technical working group (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.

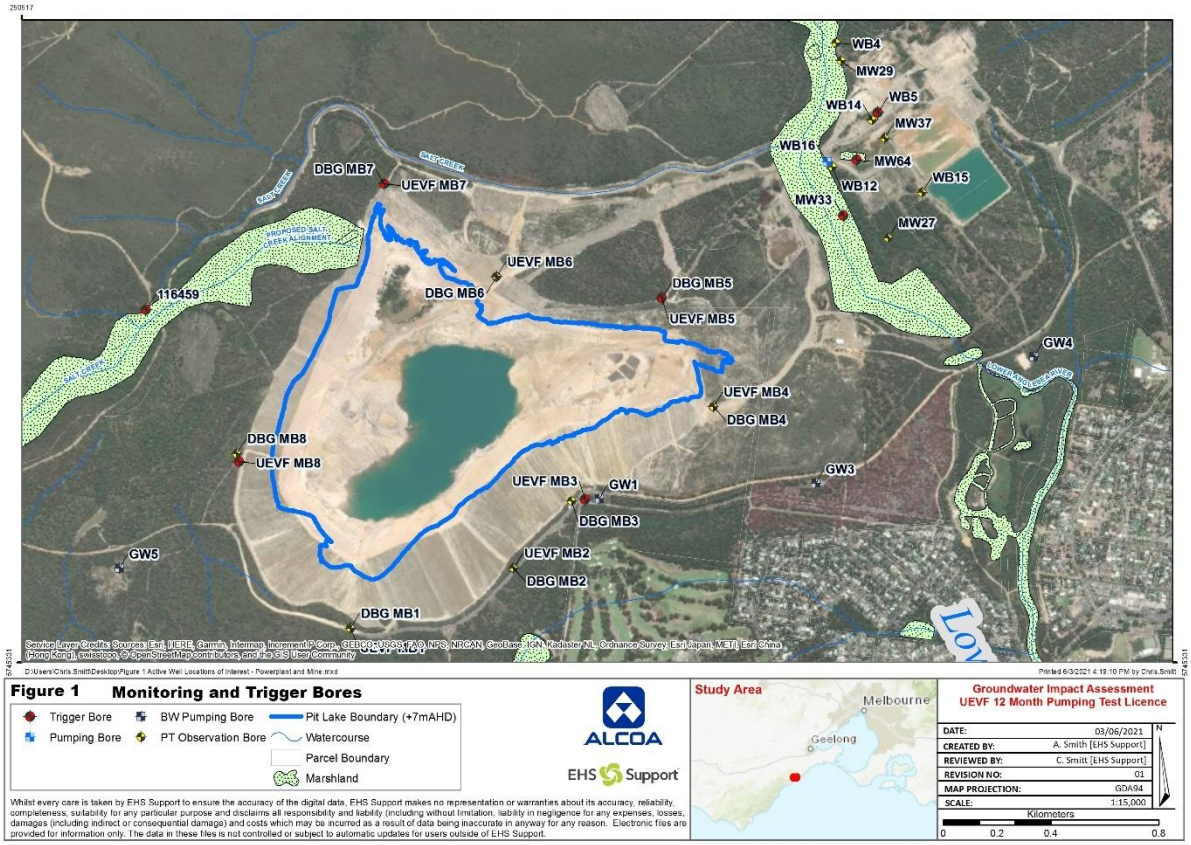

Figure 1: *Trigger and other monitoring bore locations.*

Each of the trigger bores has defined water level and/or water quality thresholds, known as a trigger, and defined response actions in the event of a trigger exceedance. 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 conservative low level to ensure we receive an early alert to prevent water extracted during the pumping test damaging 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	53.6 ML	3.45ML	53.6 ML

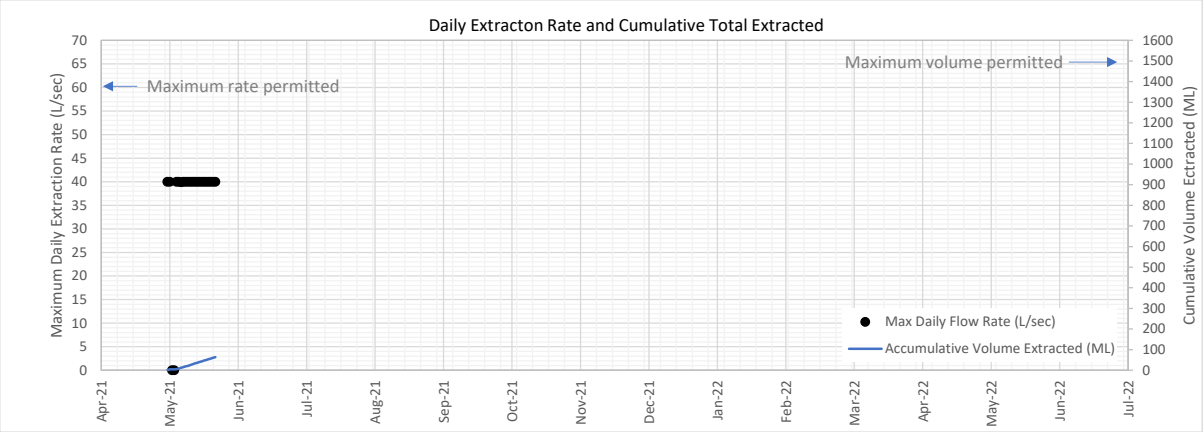

Figure 2: *Daily extraction rate and cumulative total extracted*

Waterbody level

Date	Waterbody level RL (m)
26 April 2021	-20.93
24 May 2021	-20.42

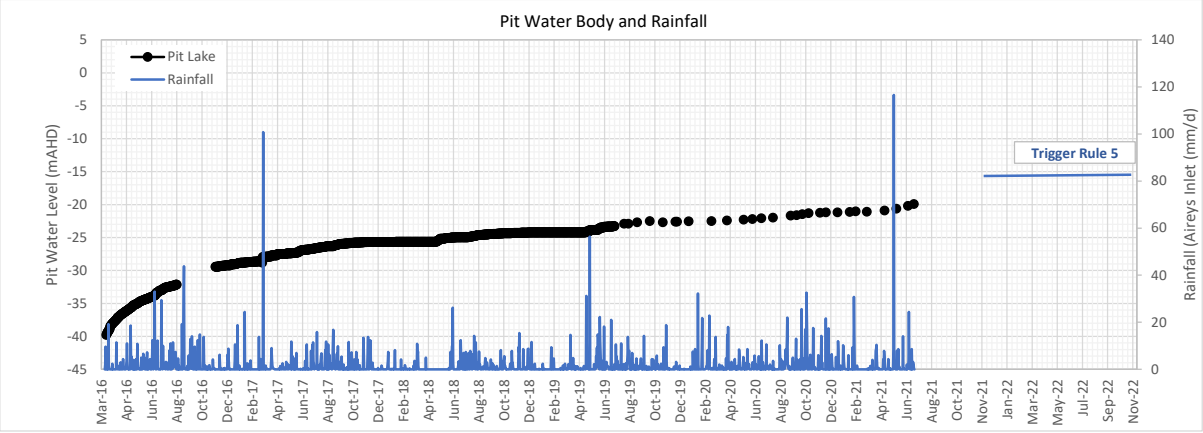

Figure 3*: Pit waterbody level and rainfall*

Groundwater level monitoring and trigger status

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

Bore	Overall status	Action / Comment
WB05	No trigger reached	Continue to monitor
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
MW33	No trigger reached	Continue to monitor

Bore	Overall status	Action / Comment
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 exceeded during this reporting period.

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