

In response to Gordon Chase's request, made during the March CAG meeting (rescheduled from February), to provide more information on how EPA determined that there was no affect from the pumping of the Ambler Well #4, the following information is provided.

A detailed description of the Ambler Well #4 2013 data:

Ambler Well #4 pumping in 2013-

Started for the year on June 10, 2013. Pumped 1,923,785 gallons of water during June 2013, which equals 96,169 gallons (on average) per day.

In July 2013, the well pumped 2,645,774 gallons of water, which equals 85,348 gallons (on average) per day.

In August 2013, the well stopped pumping on August 6. The well pumped 391,238 gallons of water, which equals 65,206 gallons (on average) per day.

The USACE Reservoir Study investigated the hydraulics of the reservoir from March 13, 2013 to August 23, 2013, using a total of five transducers in BoRit Site wells and the reservoir. The report did not note any changes in the transducer level measurements when the Ambler Well #4 began pumping on June 10, 2013 or when the Ambler Well #4 was stopped on August 6, 2013. In section 3 of the USACE Reservoir Hydraulic and Berm Stability Investigation (September 2013) the following changes in groundwater level are the only changes noted:

“MW-03 (Figure 3.5) clearly shows an interesting phenomenon each weekend. Note that the

dark vertical lines on the plots are placed between Friday and Saturday. Nearly every weekend, a significant head rise is noted on Friday or Saturday. The head remains high through the weekend and then drops back to previous trends on Monday or Tuesday. This occurs on weekends when there was no rain. Occasionally weekend rain masks part of the signal. Note the following examples on Figure 3.5:

- Saturday, March 16 – Monday, March 18. Although there was only a trace amount of rain on Saturday, the head rose nearly 0.5 feet and then dropped off. The falling water level was halted by a new rainstorm beginning in the evening of March 18.
- Saturday, March 23 – Tuesday, March 26. The head rose about 0.2 feet on Saturday. It was prevented from dropping back to its previous level until Tuesday by a small rainstorm on Monday.
- Friday, March 29 – Monday, April 1. The head rose over 0.5 feet on a nearly dry weekend and then dropped back to lower levels.
- Saturday, April 6 – Monday, April 8. The head rose nearly 0.5 feet on a dry weekend and then dropped back to lower levels.

- Saturday, April 13. The signature may have been masked by the rainfall.
- Saturday, April 20. The signature may have been masked by the rainfall.
- Saturday, April 27 – Monday, April 29. Water levels began rising ahead of rainfall on the 29th. The transducer battery died before the water levels recovered.
- Saturday, May 4 – Monday, May 6. Water levels rose by approximately 0.3 feet although

there was no rain. On Monday, the water levels fell back to the pre-existing trend.

- Saturday, May 11 – Monday, May 13. The rise in water levels was masked by rainfall on Saturday. After the rain, water levels fluctuated until Sunday afternoon, and then they

continued to rise, although the rain had long-since stopped. On Monday, the levels began

to drop.

- Saturday, June 15– Monday, June 17. Water levels rose by approximately 0.25 feet although there was no rain. On Monday they dropped back to the original trend.
- Saturday, July 20 – Monday, July 22. Water levels rose by approximately 0.25 feet although there was no rain. On Monday they dropped back to the original level
- Saturday, August 3 – Monday, August 5. Water levels rose by approximately 0.25 feet although there was no rain. On Monday, they dropped back to the original trend.
- Saturday, August 10 – Monday August 12. Water levels rose by approximately 0.25 feet after a trace amount of rainfall on Friday. On Monday, the water levels dropped again just ahead of a large storm on Wednesday.
- Saturday August 17 – Monday, August 19. Water levels were already dropping after a large storm event, but the falling trend was interrupted by a rise in heads of approximately 0.25 feet on Saturday. On Monday the water levels dropped and continued the falling trend.

This same weekly signature can be clearly seen in the MW-07 (Figure 3.7) and, to a lesser degree, in MW-01A (Figure 3.3) and MW-02 (Figure 3.4), where the head changes are smaller and often masked by the noise of the signal. This anomaly is not, however, noted in the reservoir, although MW-03 is adjacent to the shore of the reservoir. The cause of this anomaly is most likely two nearby upgradient industrial wells associated with a business in Ambler. Pumped volumes are high (about 16 million gallons per year together) and generally they are reported to be pumping for around 20 days per month.”

The wells that contributed to the trend described above are from Gessner Products. They have a north and a south well which pump approximately 6,000,000 and 10,000,000 gallons per year respectively. This information has been provided by the Pennsylvania Department of Environmental Protection (PADEP) from information received as part of the company’s National Pollutant Discharge Elimination System (NPDES) permit. These wells are located in closer proximity to the BoRit Site than the Ambler Well #4.

EPA concluded that since the transducers did not identify a change caused by the Ambler Well #4 that the Site groundwater is not influence by the pumping of Ambler Well #4.

Mr. Chase also asked why the other Ambler pumping wells were not investigated. The following information is provided:

Ambler Well #9 is located approximately four times further away from the BoRit Site than Ambler Well #4. Well #9 is about 200 feet deeper than Well #4 and the pump is placed almost 65 feet deeper than Well #4. EPA infers that since Well#4 does not influence the Site groundwater neither will Well #9.