

To:	Environment Agency	From:	Envireau Water
Ref:	P:\TE KMA Monitoring 2018 (2335)\40- Reporting\ CAR 402444\0311313\TN1.docx	Pages:	2
Re:	KMA Water Quality Results – response to Environment Agency required actions CAR 402444/0311313	Date:	31/07/2018

1 INTRODUCTION

This technical note has been prepared by Envireau Water in response to actions required by the Environment Agency in EPR Compliance Assessment Report 402444/0311313. The actions relate to surface water and groundwater samples collected in June 2018.

2 ENVIRONMENT AGENCY REQUIRED ACTIONS

The Environment Agency required actions are presented in blue italics, followed by the Envireau Water responses in Sections 2.1 and 2.2 below.

Action: Report on the results of the laboratory investigations.

We note that:

- The ion balance error for BHE exceeded 10% and is being followed up with the laboratory*
- Copper has been detected in the blank sample and that contamination of the distilled water is suspected and is being investigated.*

2.1 Ion Balance Error

The ion balance error initially reported for BHE was 14%, which was considered high. A repeat analysis of the major cations and anions was conducted and showed that the bicarbonate concentration had been impacted by analytical error and was 540 mg/L rather than the previously reported 301 mg/L. The ion balance error for BHE is therefore recalculated at 11% and is within the error range (albeit towards the higher end) reported in previous sampling rounds. No further investigation is therefore warranted.

2.2 Copper

There have been several detects of dissolved copper in the blank samples during recent sampling rounds. Cross-contamination has been investigated and ruled out. As such contamination of the distilled water used in the blank sample was investigated. A sample of the distilled water used in the June sampling round (from the same batch used in previous sample rounds where dissolved copper had been detected) was re-analysed

along with a sample from a new batch of distilled water. The laboratory investigation confirmed that the distilled water from the June sampling contained 28 µg/L dissolved copper (comparable to previous detects) whilst the distilled water from the new batch contained dissolved copper below the limit of detection. No further investigation is therefore warranted.

It should be noted that similar issues with distilled water were investigated at the start of 2018; leading to a change in the distilled water supplier at that time. It is therefore proposed to test any new batches of distilled water prior to use in future monitoring rounds in order to identify the presence of trace metals or other elements.

Envireau Water

31/07/2018