Drinking Water

Open Access

Engineering and Science

Discussions

[DWESD]

Interactive
comment

Interactive comment on "Design methodology to determine water quality monitoring strategy of surface water treatment plants" *by* Petra Ross et al.

Wim Audenaert (Referee)

wim.audenaert@am-team.com

Received and published: 1 July 2019

GENERAL COMMENTS This manuscript can be descirbed as a highly applied research paper, bringing together formerly published concepts and applying them to two treatment units of specific drinking water treatment plant. Taking into account the importance of the topic, and the applied character of the journal, I am of the opinion that its publication will be valuable for many practitioners.

I agree with Referee 1 that a weakness of the paper is that real plant application and related improvements were not proven. However, coming back to the drinking water practitioners, the value lies in demonstrating the 7 step framework in a very easy way.

Most likely, not many drinking water plants have made such structural exercises, and this paper can lower the barrier of doing so. Hence, the objective of publishing this paper is not necessarily to present novel knowledge, but to show how to set up apply a monitoring framework in practice. It is important that the authors therefore reframe the paper as such, that it does not promise to provide the reader with a methodology that was proven to optimise a plant. It has the potential for that. The focus should be on illustration of practical use of such a framework, and the offering of a methodology to structurally question's one's train monitoring and control strategy.

SPECIFIC COMMENTS -There are very recent efforts going on with regard to on-line bromate sensor development, based on fluorescence measurement. This might be mentioned. The company Metawater is working on this (https://www.metawater.co.jp/eng/product/rd/sensor_technology/bromic_acid.html). -Fluorescence as a means of characterising NOM properties has not been mentioned. However, one-wavelength sensors are now being introduced on the market. Their benefit compared to UV-VIS might be their sensitivity at low DOM levels

TECHNICAL CORRECTIONS -Some references are missing in the reference list. Examples are Rieger et al., 2004; van der Helm et al., 2009. Please check for completeness. Potentially others are missing. -This paper is probably part of a PhD thesis. Remove any references to that, such as p4, line 27 ('Chapter') -typo at p4, line 16: 'imbedded' should be 'embedded' -p5, line 11: title should be Treatment step objectives, instead of treatment plant objectives -typo at p7, line 22: 'in the first columns' -typo at p7, line31: 'evaluation of available on-line sensors and their ...' p10, line24: 'cheap' –>describe more scientifically

Interactive comment on Drink. Water Eng. Sci. Discuss., https://doi.org/10.5194/dwes-2019-8, 2019.