commentletters

From: Allegra da Silva <Allegra.daSilva@mwhglobal.com
Sent: Tuesday, October 25, 2016 11:20 AM
To: commentletters
Cc: Kati Bell; Sundaram, Vijay; Zakir Hirani; James Borchardt; Victor Harris; Melanie Holmer; Daniela Castaneda
Subject: DPR Feasibility Report - Comment Letter from Stantec/MWH
Attachments: Water Board Draft Report on DPR Feasibility - Stantec and MWH comments.docx

Dear Jeanine Townsend, Clerk to the Board,

Attached please find comments on the State Water Resources Control Board's September 2016 Public Review Draft titled "Investigation on the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse." This letter is submitted on behalf of Stantec/MWH.

Best regards,
Allegra da Silva
Kati Bell, Vijay Sundaram, Zakir Hirani, Jim Borchardt, Victor Harris, Melanie Holmer, and Daniela Castañeda

MWH now part of Stantec

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Investigation on the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse
Report from the State Water Resources Control Board
September 2016 – Public Review Draft

Comment Letter - Report to the Legislature on DPR
From MWH/Stantec [Kati Bell, Vijay Sundaram, Zakir Hirani, Jim Borchardt, Victor Harris, Melanie Holmer, Daniela Castañeda, and Allegra da Silva]

Reports developed by the Expert Panel, Advisory Group, and State Water Resources Control Board are an excellent compendia of current state of knowledge regarding DPR. They set a vision for a path to DPR in the State of California. The rigor and thoroughness that went into these reports is apparent and they serve as a resource for water planners globally. We offer two comments on the State Water Resources Control Board's Public Review Draft as suggestions for clarification in the final report.

Comment 1 – Recommendation #5 (page v) (also referenced in: research recommendation #5 on page 17, Research and Knowledge Gaps Recommendation #6 on page 22, and Expert Panel's recommendation #8-3 on Page 221) to incorporate a final treatment process after the AWT train to allow "averaging" of potential chemical peaks that can be caused due to unauthorized short-term peak discharges of chemicals into the wastewater collection system.

- Are the chemical spikes emerging from the unauthorized discharges expected to be detected through online monitoring such as TOC or TDS?
- If these constituents result in exceedances of a certain bulk water quality parameter such as TOC or TDS, wouldn't that automatically trigger diversion of off-spec water? If they are not expected to be detected through online monitoring, then how would DDW specify the required mitigation measures specific to a certain facility? How much "averaging" would be needed, how would it be specified?
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- Separate from treatment, one of the potential recommendations for "averaging the peaks" in Expert Panel's recommendation #8-3 was a holding tank. Would this be different from the engineered buffer?

Comment 2 – Recommendation #3 (page v) (also reference: research recommendation #3 on page 16, Research and Knowledge Gap #4 on page 21, and Expert Panel's recommendation #2-1 / #8-2) to require monitoring of pathogens in raw wastewater to develop better empirical concentration and variability data)

"The State Water Board will work with the RWQCBs to include monitoring requirements for pathogens (i.e., Giardia cysts, Cryptosporidium oocysts, and several human viruses) in the raw (untreated) wastewater feeding potable reuse systems, using improved methods that allow for better characterization and improved precision of concentrations of pathogens, to provide more complete information on concentrations and their variability."

- Suggest more clarity in the recommendation. Would this be a short-term or long-term requirement? Would it be applicable to wastewater treatment plants that currently implement any (indirect or direct) potable reuse? Would it apply to those who plan to implement potable reuse but do not currently? Is it a preliminary permitting requirement for some time period before a direct potable reuse project is approved/permitted?

In addition, we offer the following comments on the discussion in Expert Panel Feasibility Report regarding the retention time in an engineered or environmental buffer.

- The Expert Panel Feasibility Report in section 9.1.2 cites that IPR projects using surface water augmentation (SWA) do not include an alternatives clause. However, in reading the cited reference (NWRI, 2015b), section 60321.001(a)(1) states "A project sponsor may use an alternative to a requirement in this Article if the SWSAP's water recycling agency: (1) demonstrates to the Division of Drinking Water Quality that the proposed alternative provides an equivalent level of performance with respect to the reliability and removal of contaminants of concern and assures at least the same level of protection to public health." Thus, it seems that indeed, IPR by SWA can include projects with a hydraulic retention time of less than 4 to 6 months – so is there indeed a "gap"?
- It is important to note a pulse of off-spec water entering a well-mixed reservoir (such as in the winter) would theoretically result in instantaneous concentration at the WTP inlet equivalent to the dilution factor of the reservoir. And, in conditions of short-circuiting, concentrations would be higher than that. Thus, during well-mixed conditions, there would be no effective "response time" offered by a surface water reservoir – just dilution. Therefore, what is the theoretical difference between IPR via surface water augmentation (SWA) and DPR with the equivalent dilution? Could the IPR-SWA criteria be harmonized with future DPR criteria/recommendations to create an overarching criteria for potable reuse not involving groundwater recharge, rather than attempting to distinguish between IPR-SWA and DPR? Such an IPR-SWA/DPR framework could include a risk-based matrix outlining treatment or dilution requirements for various effective response times.