

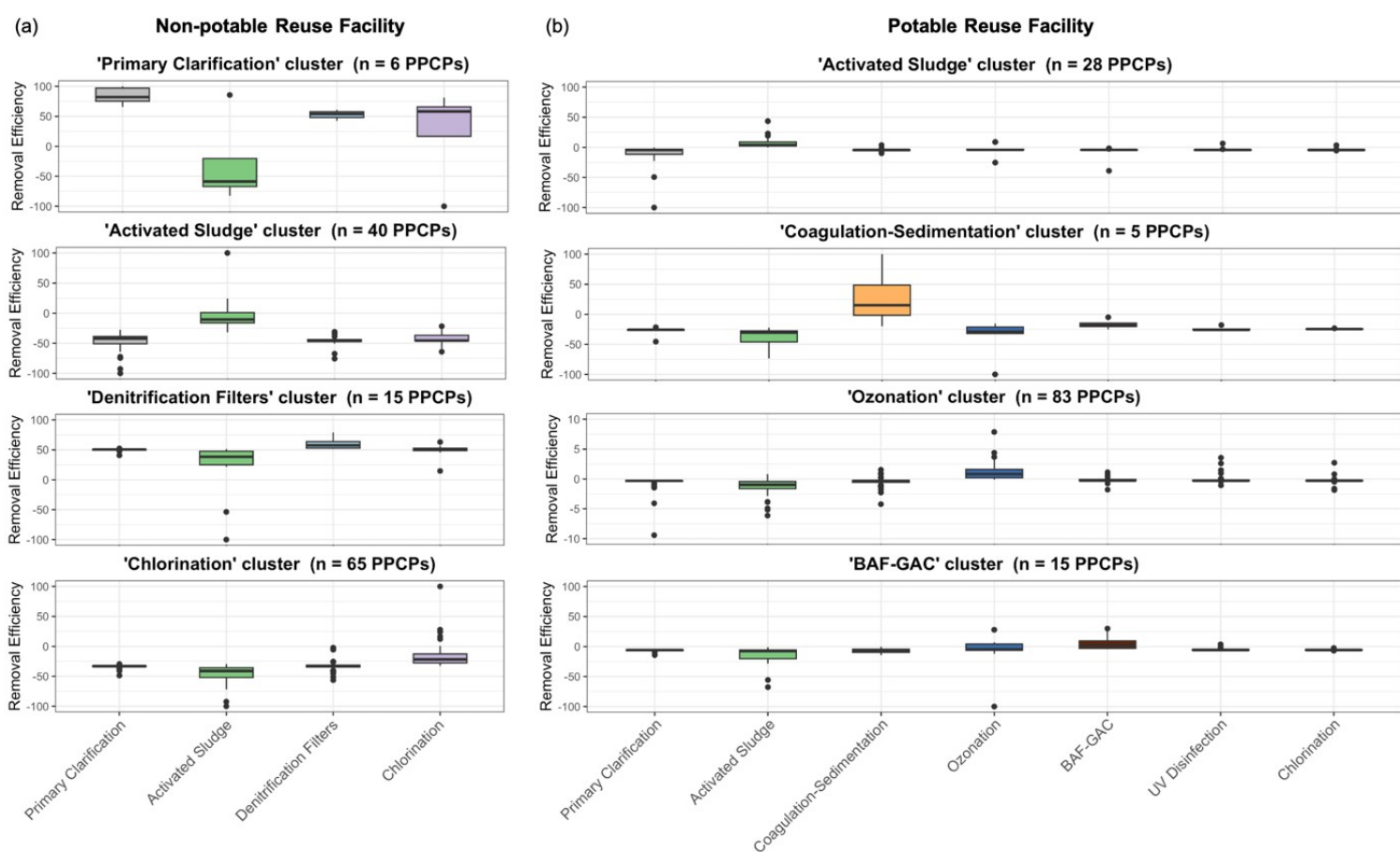
## Supplementary Figures

**Supplementary Figure S1** Distribution of the representative process treatment efficiencies across each treatment process among the PPCPs for each corresponding C1 cluster. Min-max normalization with the range of -100 to 100 was performed for improved visualization. (a) Non-potable reuse and (b) potable reuse treatment trains

**Supplementary Figure S2** Distribution of Abraham descriptors for each cluster based on the C1 clustering approach, i.e., the removal pattern across the facility in (a) non-potable and (b) potable reuse facility

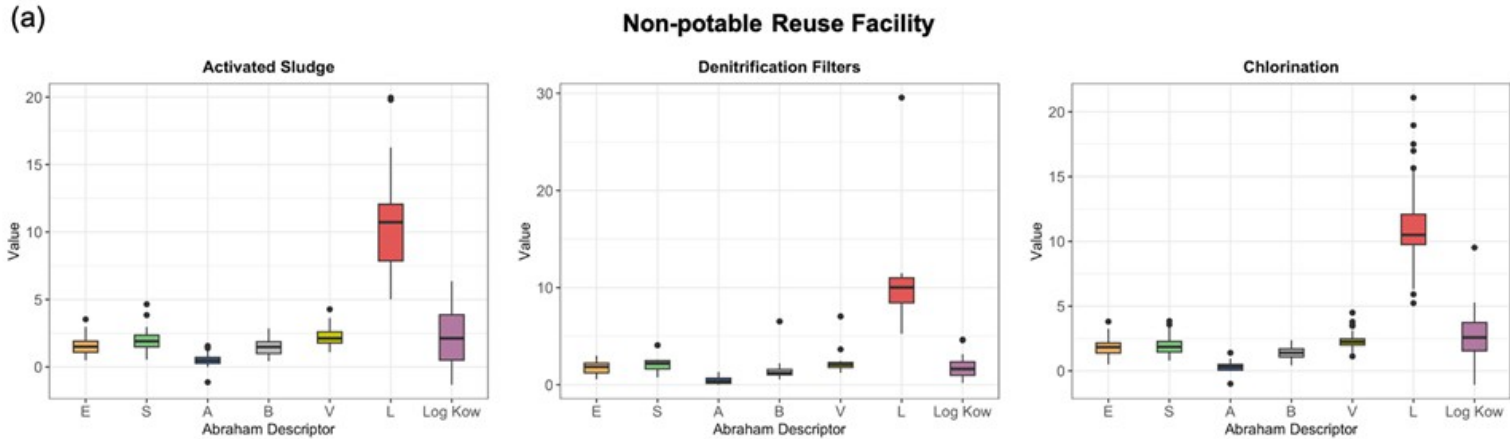
**Supplementary Figure S3.** Distribution of Abraham descriptors for each cluster based on the C2 clustering approach, i.e., the removal pattern across the facility in (a) non-potable and (b) potable reuse facility

**Supplementary Figure S4.** Distribution of Abraham descriptors that were associated with statistically significant differences based on Kruskal-Wallis test ( $p$ -value  $< 0.05$ ) across the clusters based on the C1 clustering method, i.e., the most efficient individual treatment process at each facility.

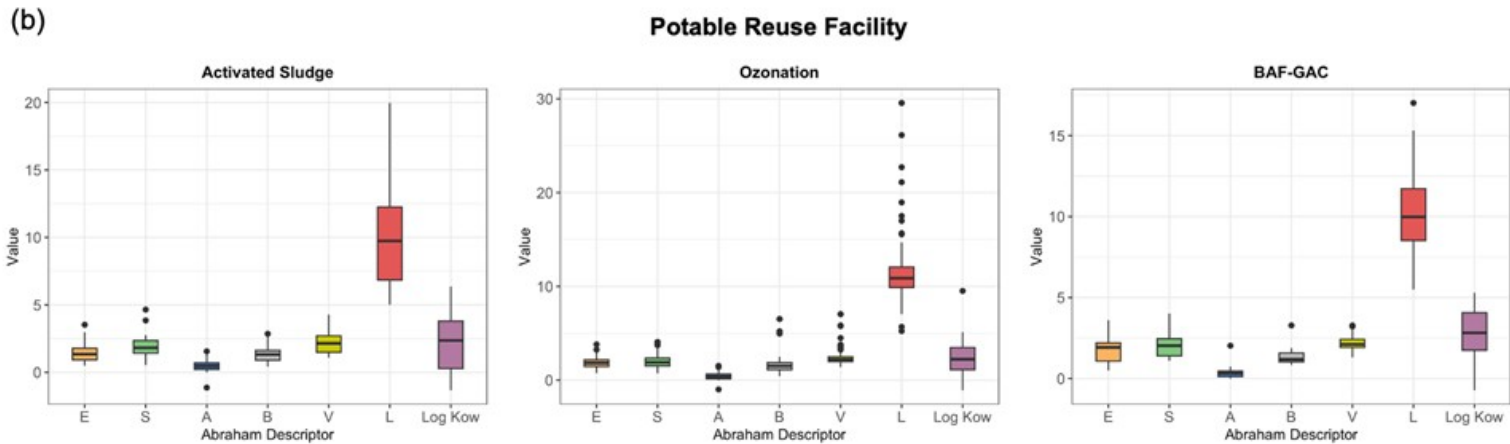


**Supplementary Figure S1.** Distribution of the representative process treatment efficiencies across each treatment process among the PPCPs for each corresponding C1 cluster. Min-max normalization with the range of -100 to 100 was performed for improved visualization. (a) Non-potable reuse and (b) potable reuse treatment trains.

(a)

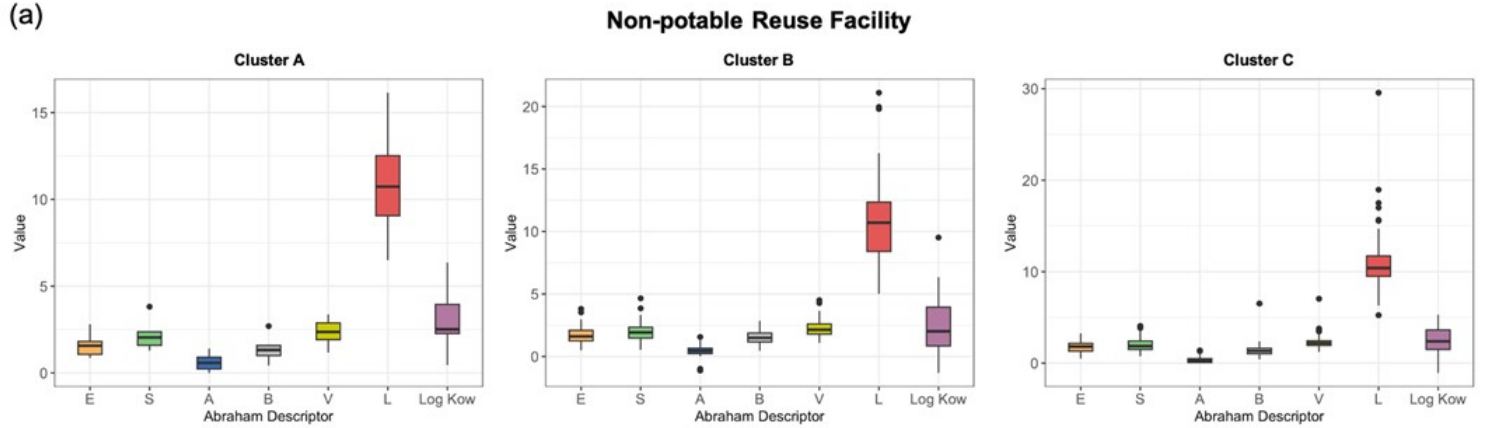


(b)

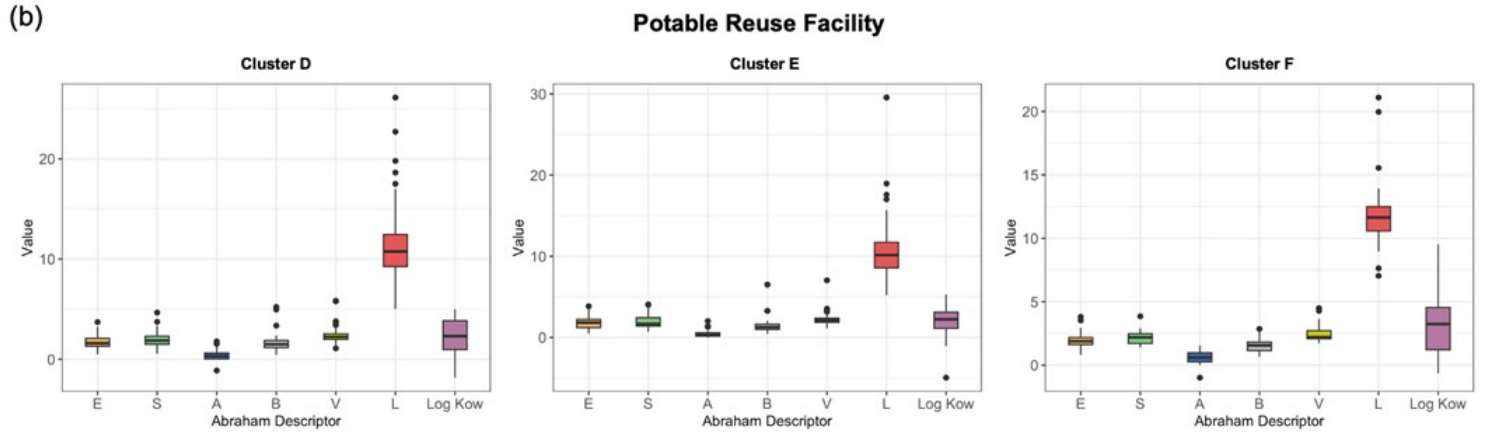


**Supplementary Figure S2.** Distribution of Abraham descriptors for each cluster based on C1 clusters, i.e., the most efficient individual treatment process for corresponding removal of the PPCP for (a) non-potable and (b) potable reuse facility

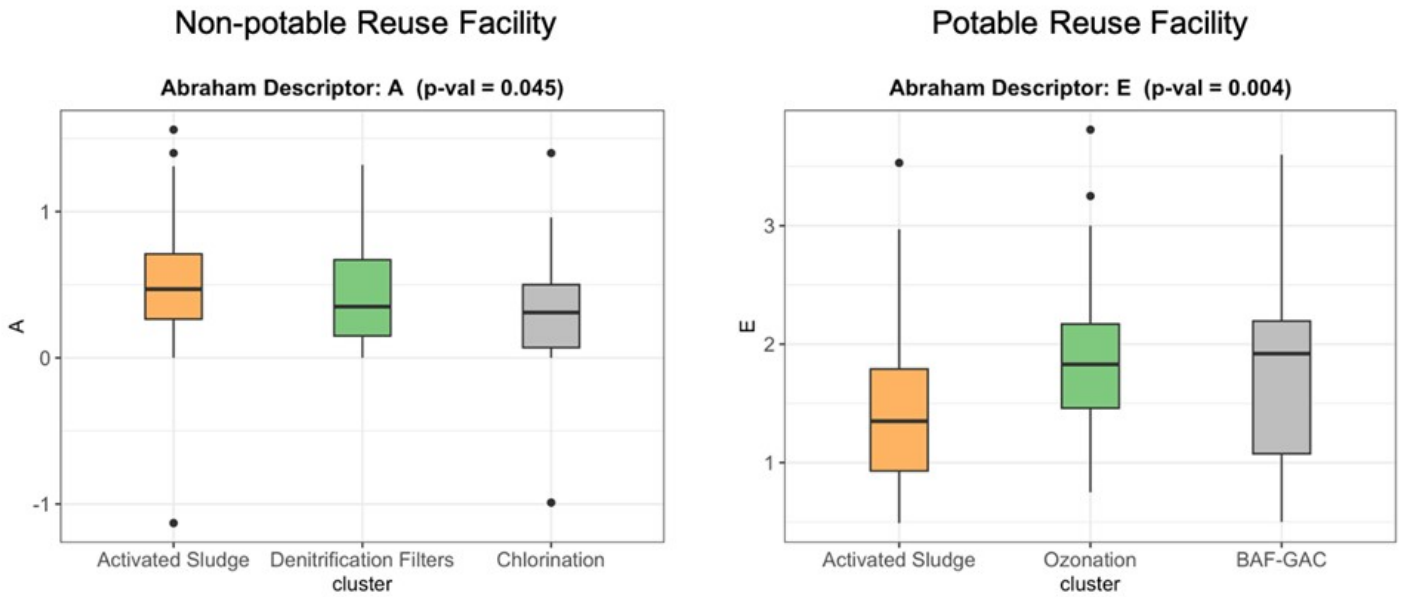
(a)



(b)



**Supplementary Figure S3.** Distribution of Abraham descriptors for each cluster based on the C2 clustering approach, i.e., the removal pattern across the facility in (a) non-potable and (b) potable reuse facility .



**Supplementary Figure S4.** Distribution of Abraham descriptors that were associated with statistically significant differences based on Kruskal-Wallis test ( $p$ -value  $< 0.05$ ) across the clusters based on the C1 clustering method, i.e., the most efficient individual treatment process at each facility