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REVIEWER'S REPORT

Manuscript No.: IJAR-59905

Title: Sustainable Industrial Water Management through Process Optimization, Wastewater Reuse, and Environmental Performance Improvement in Saudi Arabia.

Recommendation:

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		Good		
Techn. Quality		Good		
Clarity		Good		
Significance		Good		

Reviewer's ID: JPR-341

Detailed Reviewer's Report

The manuscript addresses a significant and timely topic concerning sustainable industrial water management in Saudi Arabia. It provides a comprehensive critical narrative review of research published between 2020 and 2025, focusing on process optimization, wastewater treatment and reuse, and environmental performance assessment. The discussion effectively connects industrial water demand reduction with water pinch analysis, source segregation, biological and membrane treatment technologies, concentrate management, and life-cycle assessment. A particular strength of the manuscript is its emphasis on fit-for-purpose wastewater reuse and the need to evaluate freshwater savings alongside energy consumption, residual pollution, operational reliability, and environmental impacts. The proposed integrated management framework offers a useful practical approach through baseline audits, contaminant assessment, treatment selection, operational safeguards, and independent performance verification. The manuscript also provides relevant insights into the challenges and opportunities associated with implementing sustainable water-management practices across Saudi industrial sectors. Its organization, technical discussion, and connection with Saudi Arabia's water sustainability priorities make it relevant to researchers, industrial professionals, and policymakers. Overall, the manuscript makes a valuable contribution to the subject. Minor revision is recommended to improve methodological presentation, consistency in terminology and references, and the clarity of tables and figures.