)LOHG GHPRQVWUDWLRQ RI D SRUWDEOH 76 DI +)0 QDQR¿OW RI RLO¿HOG SURGXFHG ZDWHU

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Statement of the Problem: Flowback and/or produced water (P/F water) is the largest byproduct stream associated with oil and gas production. e P/F water contains elevated concentrations of dissolved salt (20,000 to 300,000 ppm), suspended solids, soluble organics and low concentration of BTEX. Management of F/P water is a particular concern due to the wide rang of constituents which are of concern to both unconventional shale gas developers and the environment. e overall objective of this project is to develop and demonstrate the performance and cost-e ectiveness of a portable Two-Stage, Antifouling Hollow Fiber Membrane (TS-af-HFM) nano ltration process to convert produced water into a clean water product for a reused uid or direct discharge.

Methodology & eoretical Orientation: Large amounts of super hydrophobic PVDF/Si-R hollow ber membranes and super hydrophilic PES/SiO_2