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Comparison of Pyrolucite Fixed and Fluidized Beds for Iron and Manganese Control in Groundwater: A Pilot-Scale Study

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Highlights

- Selection of an appropriate distributor plate was crucial for the PFB performance.
- Initial Fe concentration severely affected the PFB performance for Fe/Mn control.
- PFB is recommended for utilities with Mn removal objective and negligible Fe level.
- Fe/Mn control was properly achieved within the fixed bed under elevated Fe level.
- Headloss within the PFB contactor remained constant, regardless of water quality.

Abstract: Iron and manganese removal is a common water treatment goal in groundwater systems.

Pilot-scale pyrolucite fixed and fluidized bed contactors were tested in parallel to examine the iron and manganese removal from a natural groundwater which was supplemented with iron and manganese in

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