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(54) **SYSTEMS AND METHODS FOR IMPROVED RAFFINATE INJECTION**

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(57) **ABSTRACT**

The present disclosure provides a method comprising determining an ore map for a heap to identify a location of a recoverable metal-bearing material in the heap, wherein the metal-bearing material comprises iron and at least one other metal value, delivering a leaching solution from a leaching solution source to a leaching solution regulating system, wherein the leaching solution comprises citric acid and hydrogen peroxide, regulating at least one of a pressure, mass flow rate, or a volumetric flow rate of the leaching solution to achieve a target operational condition, wherein the leaching solution comprises an effective amount of citric acid and hydrogen peroxide, regulating at least one of a pressure, a mass flow rate, or a volumetric flow rate of the leaching solution to achieve a target operational condition

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